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ABSTRACT

The Remoteness and Access to Learning Opportunities in the Pacific Region Study was carried out to investigate whether access to learning opportunities (ALO) is related to the remoteness and isolation of many schools in the Pacific region. The study also profiles the conditions of remote and isolated schools and the ALO for Pacific students. Seven entities (American Samoa, Commonwealth of the Northern Mariana Islands, Republic of the Marshall Islands, Republic of Palau, and Chuuk, Pohnpei, and Yap States of the Federated States of Micronesia) participated in the study. Data were collected from a total of 230 public and private elementary and secondary schools. Analyses were conducted on one composite and three single remoteness variables and 25 ALO indicators. About half of the schools fell in the upper half of a remoteness scale constructed for the study. Some faculty and staff indicators favored remote schools, but some, such as fewer teachers with bachelor's degrees, did not. Remote schools generally had less equipment and fewer student services, but curriculum was not directly affected by remoteness. Recommendations for improving access in the region include: (1) recognize and build upon the fact that remote schools may have certain advantages over less remote schools; (2) put more resources into physical equipment and books for more remote schools; (3) put more resources into student services, especially special education; (4) provide special training for the staff of more remote schools in implementing policies; (5) increase emphasis on staff development; and (6) conduct more in-depth research into the nature of the educational experience in remote isolated schools. Appendixes describe the relationship between remoteness and ALO indicators and present the study instruments. (Contains 90 tables and 17 references.) (SLD)

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Remoteness and Access to Learning Opportunities in the Pacific Region

Research and Development Cadre

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November 1995

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Preface

This report represents a significant milestone in an ongoing process of collaborative research. As such, it is not a "final" report. The PREL R&D Cadre was formed and has developed as a new kind of data collection and analysis group for the region and each entity. Each step in the process has been a combination of learning for the R&D Cadre members as well as the creation of new knowledge about the region. To learn more about remoteness and access to learning opportunities, a vast amount of data was collected. The lengthy data collection instruments are included as appendices to this report. They provided more data than could be fully analyzed in this report. Therefore, the methodology and the results should be viewed as a preliminary investigation of access to learning opportunities in the Pacific.

The report will enable R&D Cadre members to present preliminary study results to their colleagues and communities throughout the region. Feedback from these presentations will assist the R&D Cadre and PREL in structuring future research into the important issue of access.

PREL intends to maintain the access to learning opportunities (ALO) database for future analyses and development. Future research may include the degree of felt remoteness by residents of an entity, other variables affecting access to learning opportunities, and interviews with former respondents concerning their interpretation of the results.

Executive Summary

Purpose

The Remoteness and Access to Learning Opportunities in the Pacific Region (ALO) study was carried out by the Pacific Region Educational Laboratory (PREL) Research & Development (R&D) Cadre to investigate whether access to learning opportunities is related to the remoteness and isolation of many of the schools in the Pacific region. In addition, this study profiles the conditions of remote and isolated schools and the opportunities to learn available to Pacific students.

Method and Scope

Representatives from each of the 10 American-affiliated Pacific entities served by PREL planned the ALO study. Seven entities, American Samoa, Commonwealth of the Northern Mariana Islands (CNMI), Republic of the Marshall Islands, Republic of Palau, and Chuuk, Pohnpei, and Yap States of the Federated States of Micronesia participated in the study. Data were collected from public and private elementary and high schools in these entities during the 1994-1995 school year. A total of 230 schools were included in the database from which these study results were derived. Analyses were conducted on one composite and three single remoteness variables and 25 access to learning opportunities (ALO) indicators. Separate analyses were conducted for the 20 high schools and 210 elementary schools in the study.

Results

First, schools were compared on several general indicators of remoteness: mileage from the central DOE, daily public transportation, and telephone communication. Many of the schools had characteristics that would make them considered remote. Over half of the schools, for example, reported having no telephone communication. Because no single remoteness variable was considered adequate, a composite remoteness indicator was constructed based on combining distance, transportation, and communication variables. This provided an 8-point scale of remoteness. About half the schools in the study fell in the upper half of the scale (remoteness scores of 1-4) and about half in the lower (scores of 5-8). The analyses looked at the relationship between the composite remoteness scale and the 25 ALO indicators. The results may be summarized as follows (see Table 1).

Table I. Executive Summary of Findings

Type of ALO Indicator	Findings
Faculty and Staff	Some indicators favor remote schools (lower student/certified teacher ratios); some are difficult to explain (more very inexperienced as well as more very experienced teachers in remote schools); some are unfavorable (fewer BA level teachers).
Curriculum	Generally, no disadvantage was found for remote schools. Core courses offered, and three books/student ratios show no relationship to remoteness.
Instructional Equipment	This indicator was strongly related to remoteness. Remote elementary schools have less equipment.
Student Services	This indicator was also strongly related to remoteness. Remote schools have fewer services.
Policy Implementation	This was somewhat related to remoteness. Remote schools were less likely to implement testing and language policies or to have a modified attendance policy.
Community Support	There was not a strong relationship to remoteness. The differences suggest more community support (more active PTA) at remote high schools.

Recommendations

1. Recognize and build upon the fact that remote schools may have certain advantages over less remote schools.

Remote elementary schools tend to have lower student/teacher and especially student/certified teacher ratios. This can be a real advantage in terms of more contact with the teacher and more individualized instruction. School systems should look for ways to optimize this situation. One way to approach this is through staff development activities designed specially for teachers who can work with very small groups of students or who can individualize instruction. Assessment activities for teachers of small mixed age group students could also help. Because the more remote schools also have more local teachers, build upon their strength of local knowledge and culture.

2. Put more resources into physical equipment and books for more remote schools.

While the more remote elementary schools are disproportionately without equipment, almost all of the schools need help in this area. Not all schools have the electricity or connections to be able to utilize computers and televisions, however, inequities in the distribution of these and other pieces of equipment

should be corrected. While remoteness is not necessarily associated with availability of books, there is a general lack of books throughout the region.

3. Put more resources into student services, especially special education, for remote schools.

The dilemma is how to provide special education programming in schools where there may be small numbers of students eligible for such services, or personal counseling when such need is infrequent. Strategic thinking is needed to bring about equal access in these areas. Although teachers can be trained, no one teacher can be an expert in all educational areas. Mobile specialists have a role to play, but cannot always be where they are needed immediately. Some combination of these, with increased use of media and technology, may at least bring some change towards a more equitable situation.

4. Provide special training for the staff of more remote schools in implementing policies.

It may be that some statewide policies cannot be implemented everywhere. But it is the more remote schools that are not following these policies in testing and language of instruction. Special training sessions can be effective in moving toward a more uniform application of policies. Policymakers should, however, remain somewhat flexible and be willing to reconstruct policies that are counterproductive in more remote areas.

5. Increase emphasis on staff development.

Given the particular constellation of faculty characteristics at remote schools--fewer with BA degrees, more AA and AS level teachers, more local teachers, and fewer staff development opportunities--an increased emphasis on targeted staff development for teachers at remote school locations could raise the overall quality of instruction.

6. Conduct more in-depth research into the nature of the educational experience in remote isolated schools.

Although the present study provides a baseline of information concerning the characteristics that define these schools, it does not go deeply into what actually happens in the classrooms. A more observational, case study approach is suggested for this type of research. In keeping with the first recommendation, it might be possible to select remote schools that are "successful" and conduct an effective remote schools study. This study could be directed by R&D Cadre members, building upon their knowledge of local schools in their home entity. The more such investigations are community based and culturally sensitive, the more likely they are to yield useful outcomes.

I. Introduction

Equitable access to learning opportunities is an issue critical to any discussion of education in the Pacific region. PREL serves 10 educational systems spanning 4.9 million square miles of the Pacific ocean. Geographic isolation, vast distances between sites and entities, limited economic resources in many areas, and limited training and credentials for significant numbers of educators are just a few of the challenges present in the region. In addition, 95 percent of the region's schools are classified as rural, and approximately 75 percent of the region's children live in small, often isolated settings. The prevailing conditions also often include limited access to communication and transportation, and multiple languages and cultures. All of these conditions offer challenges to the provision of quality education in the Pacific.

At present, there is no research documenting the status of opportunities to learn in remote and isolated schools in the Pacific. This study was designed to:

- Define and measure remoteness in the unique context of the Pacific.
- Profile dimensions of learning opportunities in the Pacific.
- Analyze the relationship between remoteness and opportunity to learn indicators.
- Discuss the issues that influence equitable access to learning opportunities in remote and isolated island schools.

The seven Pacific entities that participated in this study are American Samoa, the Republic of the Marshall Islands, the Republic of Palau, the Commonwealth of the Northern Mariana Islands, and Pohnpei, Chuuk, and Yap states of the Federated States of Micronesia. Each of these entities wished to explore issues of access to learning opportunities for students in remote and isolated schools.

This report provides a brief review of the literature on studies pertaining to remoteness and geographic isolation, as well as on opportunities to learn. The following section presents the methods used in conducting the study, including the specific research questions investigated and a description of the data set. The report also presents data on remoteness and isolation of schools and profiles of schools' opportunities to learn. The research questions are addressed as well as implications for addressing issues of access to learning opportunities for students in island schools. Recommendations based on the findings are also provided.

II. Review of the Literature

Providing equitable access to learning opportunities in remote and isolated schools is a daunting task. Millions of square miles of ocean separate thousands of coral atolls and high islands of the 10 Pacific entities. There is no prior research which specifically profiles Pacific schools for remoteness and isolation nor any prior research on access to learning opportunities in the Pacific region. Previous studies in the Pacific, such as the 1994 Human Resources Development in Micronesia study, prepared for the Asian Development Bank, provided a rich collection of information on the context and conditions of education and training in the Federated States of Micronesia (FSM). However, that information is limited to the four states of the FSM.

The R&D Cadre anticipated that much of the existing research literature would not be applicable to the unique and diverse Pacific region. Therefore, this review was intended to ascertain how others have tried to define and measure the complex concept of remoteness, and then to determine which of the variables used in the past could be applied to research in the Pacific. The following questions were explored:

- How are remoteness and isolation defined and measured in the literature?
- Can these definitions and measurements be applied to the Pacific region?

Similarly, the definition and measurement of the concept of opportunity to learn (OTL) was explored, and reviewed for Pacific applicability. The questions asked for OTL were:

- How are learning opportunities defined and measured in the literature?
- Can these definitions and measurements be applied to the Pacific region?

This effort began with a survey of prior research on school remoteness and geographic isolation, focusing on the issues faced by remote and isolated schools and ways in which school remoteness has been defined and measured. Researchers then looked at the emergence of the relatively new educational concept, opportunity to learn as well as the controversy about its specific definition. The research effort concluded with a working definition of remote and isolated schools pertaining to the Pacific and the R&D Cadre's definition of opportunity to learn for the purposes of this study.

Remote and Isolated Schools

In a review of the literature on geographical isolation factors in small schools, Bass (1980) concluded that the major problem facing small and remote schools was high operation costs. These costs stemmed from high per-pupil costs, including transportation and fixed costs such as energy and administrative overhead that are not affected by the size of the school. Bass goes on to describe a number of studies in which small schools used their resources inefficiently, exacerbating the problems associated with costly operations. Other studies cited by Bass show that remote schools are also less able to provide a diversity in course offerings, particularly at the high school level, and often lack special services such as health or counseling programs. Finally, remote and small schools have greater difficulty attracting and keeping well-qualified teachers as indicated by the lower average years of experience and level of education in remote areas.

In any study of the Pacific, cultural values and traditions must be taken into account. Providing qualified teachers is one challenge, but getting the community to accept an outsider is quite another. Similarly, it cannot be assumed that a diversity in course offerings is a high priority for the community. Also, in contrast to Bass' findings, much of the Pacific region has very low per-pupil expenditures.

Remote and isolated schools share many of the challenges that rural schools do. In a study of educational improvement activities in rural areas of the United States, Lewis (1992) asserts that "...neglect, constant budget cutting, and community upheavals have affected much of rural education for many years." She goes on to say that the migration to the cities of teachers who receive their first training in rural schools as well as students schooled in remote areas, links the struggles faced by rural and remote schools to the cities and larger urban communities. In many remote schools drug abuse and alcoholism are reaching urban levels, and economic hard times have hit especially hard. Facilities in remote and isolated schools are often in deplorable condition as well.

A 1992 survey showed that 161 Pacific island schools had no water, 218 had no electricity, and 136 islands had no secondary school at all (Lewis, 1992). Teacher recruitment and professional isolation are also constant problems as are the lack of teacher training programs. However, some of the perceived weaknesses of remote areas can also be strengths. Low student-teacher ratios, small school sizes, and the close-knit nature of the communities are areas that rural and remote schools can build upon. In addition, many of the reform efforts underway are suited perfectly to smaller schools.

Defining Remote and Isolated Schools

At different times, school remoteness has been used interchangeably with rurality and geographic isolation, or has been defined in terms of a school's distance from major urban centers. During the 1986 National Rural and Small Schools Consortium Conference, common terms and definitions were agreed upon

for the purpose of communicating with policymakers, legislators, and researchers. School districts or school buildings were defined as remote or isolated when they were located 100 or more miles from the nearest non-small district *and* met the definition for either "rural schools" or "small schools." According to this definition, rural schools and districts fall on a continuum and include, "...nonmetropolitan areas, sparsely populated areas or remote areas." Schools are also defined as rural when there are fewer than 150 inhabitants per square mile, or when 60 percent or more of the population lives in communities of less than 5,000 people. "Small" school districts on the other hand, were defined as having fewer than 2,000 students. Elementary schools with fewer than 350 students, and secondary schools with fewer than 750 are designated as "small." A school is labeled "very small" if it has fewer than 350 students. The emphasis for these definitions is on "ruralness" as a continuum which is affected by the interaction of topography, population density, and characteristics of the community (Journal of Rural and Small Schools, 1986).

The great distances between schools, the difficult travel conditions, and the diversity of schools in the Pacific make a general definition of remoteness for the Pacific based on topography, population density, and characteristics of the community difficult if not impossible. While these criteria would apply in some entities, in others they would be meaningless. For instance, according to this definition, schools located less than 100 miles from the nearest non-small district could not qualify as remote. However, in the Pacific, there are relatively close schools perhaps 5 miles from the nearest non-small district with no infrastructure for travel and no means of communication. These schools are obviously quite "remote."

In an earlier study, Bass (1980) found 11 criteria used in defining isolated schools, the most common of which was distance. Travel time for students was also seen as an important factor in determining isolation. Other criteria were related to population density, the availability of natural resources, geographic location, topography, and climate. The number and condition of highways was also considered. Bass argues that a single definition of isolation is too limiting, and that a combination of factors should be used in its determination. In the same paper, he presents a method for determining isolation based on two factors. *Size criterion*, where those schools with fewer than 150 students in average daily membership in grades one through six or grades seven through twelve would qualify as isolated, and *isolation criteria* which is based on distance and student travel time to school. If a school was 10 or more miles from the nearest other public school of the same level using normally traveled roads, it was deemed isolated.

In a 1993 study, Peter d'Plesse claims that close observation of those regions defined as "remote" in Australia reveals that "the correlation between distance and the evidence of remoteness in populations is not necessarily linear." In other words, distance alone is not an adequate indicator of remoteness. Like Bass, he felt that a combination of variables produced a more reliable determinant of remoteness. In his definition, resistance, referring to the cost, time, and effort required to travel between centers, is reinforced by

"structural and psychological remoteness." A relationship between these parameters forms the definition of remoteness as follows:

1. Resistance--the cost, time and effort needed to reach urban centers.
2. Structural isolation--an organization's attitudes and internal arrangements that result in inappropriate or inadequate resources and services being allocated to those whom the organization is designed to serve.
3. Psychological isolation--the attitude or state of mind in individuals which prevent them from taking steps to minimize the negative effects of their location or gaining access to services.

d'Plesse also provides a measurement for geographic isolation. The road distance between two communities is combined with travel time, road conditions, the cost, time, and effort to travel, and the level, type, and frequency of interactions between two communities to produce a geographic isolation score.

To understand the difficulty in generalizing prior attempts at defining remoteness and isolation in the Pacific, one need only contrast a 1994 map of rurality index scores for U.S. Counties with the realities of the Pacific region. The index uses 11 equally weighted elements to represent the "degree of isolation from and inability to participate in the program of the larger society." (Cleland, et al. 1994). The elements are: access to a metropolitan center via interstate highway, the ratio of college graduates to people with less than nine years formal education, percent of those employed in retail trade, percent of those employed in public service or administration, median family income, number of newspapers published in the county, population change from 1980-1990, designation as a persistent poverty county, designation as a retirement destination, and population density per square mile. In the Pacific region, there are interstate highways only in Guam and Hawai'i, and almost all paid work is in government or in small, retail enterprises. There are almost no daily newspapers, and in many areas no newspapers at all.

Opportunity to Learn

Opportunity to learn (OTL) was introduced approximately 30 years ago in the international arena among researchers conducting cross-nation comparative studies. Researchers studying student achievement recognized that differences in school curriculum could influence whether students had the opportunity to learn to solve particular problems or study specific topics (McDonnell, 1995). The early focus on OTL was on content coverage or the extent to which the intended curriculum matched the implemented curriculum. In the mid 1980s, however, researchers and policymakers became interested in including classroom processes such as teacher background, school organization, course offerings, curriculum, materials, and instructional strategies in

the education indicator data regularly collected. These new data provided a more complete picture of schools and the schooling process, enabling policymakers to compare schooling conditions in different areas.

Amid calls for high academic standards for all students, the increased attention on high-stakes consequences for student performance, as well as accountability for results, the concept of Opportunities to Learn Standards were "given public life." Educators and others began to have increased concerns about whether all students were being provided with the learning opportunities necessary to prepare them to meet these new goals. In 1992, a report by the National Council on Educational Standards and Testing (NCEST) called for School Delivery Standards as a "...metric for determining whether a school 'delivers' to students the 'opportunity to learn well' the material in the content standards." (Rauth, 1994, page 2). Rauth also describes The New Standards Project's "social compact" of the same year in which participating states and schools agreed to teach all students a curriculum that prepared them for new assessments, to prepare teachers to teach the new curriculum well, and to distribute necessary resources in an equitable manner. These school delivery standards, which later became known as opportunity to learn standards, included the schools' organizational features, and were therefore much more expansive in their meaning than before.

Shortly thereafter, opportunity to learn standards became the focus of a 1993 National Governors Association task force on education which sought to "consider how states might define and use opportunity to learn standards at state and local levels." (Traiman, 1993, page 5). Traiman's 1993 report summarized the task force's findings, and presented issues, concerns, and recommendations related to developing and implementing opportunity to learn standards.

The concept of opportunity to learn and opportunity to learn "standards" began to draw proponents and opponents during the national debate on standards and testing. The debate and controversy revolves around differing opinions on the definition, purpose, and use of opportunity to learn standards at the local, state, and federal levels. According to Rauth (1994), proponents feel that opportunity to learn standards encourage the concept of shared responsibility among "students, teachers, schools, school systems, communities, states, and the citizenry at large." (Page 1). With the rise in discussion about student performance standards, opportunity to learn standards include school and teacher accountability in the equation of improving student outcomes.

In an article examining the controversy surrounding opportunity to learn standards, Porter (1995), describes the proponents as looking at opportunity to learn as the "solution to age-old problems of equity in education." He adds that proponents feel the standards will protect students who attend inferior schools from the "potentially negative side effects of high stakes testing." On the other hand, opponents feel that strict standards will be too prescriptive and result in "...federal intrusion into local control of the quality and nature of education." (Page 21). According to Elmore and Fuhrman (1993), states have long tried to address the disparities in educational opportunities among schools with limited success. Issues of equity and equal access

to education have been met in the past with state policies requiring schools to comply with "...minimum standards, oversight, district consolidation, finance equalization, and compensatory programs." (Rauth, 1994, page 3). And yet, according to Traiman, "Our current system systematically deprives many students of these opportunities." States are now faced with the more complex challenge of providing educational opportunities so that *all children* can achieve at significantly higher levels.

In spite of the controversy, opportunity to learn is now a part of the Goals 2000 legislation, signed into law on March 31, 1994. This legislation, specifies that states applying for Goals 2000 funding must include in their state improvement plans, "standards or strategies for providing all students with an opportunity to learn." (Rauth, 1994). However, at this stage, implementation of the standards is voluntary.

Defining Opportunity to Learn

In a 1994 synthesis of the "recent thinking and writing" about Opportunities to Learn Standards, Marilyn Rauth notes that opportunity to learn standards were proposed to maximize fairness and equity for students, and represent "...the factors, elements, or conditions of teaching and learning that are necessary for all students to have a fair opportunity to achieve high performance standards." (Page 1). But what are these factors, elements, and conditions? In a 1994 synthesis report on the use of opportunity to learn standards, Ysseldyke asserts that opportunity to learn "...has never been clearly defined or used in the same way by different groups." For some, it means smaller class sizes, academic engaged time, or money spent on instruction. For others, it means the quality of teachers, curriculum coverage, or a combination of other variables. This lack of clarity, according to a 1995 National Center on Educational Outcomes (NCEO) Policy report, is one of the major issues surrounding opportunity to learn standards.

Ysseldyke (1994), examined differing perspectives on opportunity to learn standards and found that for many, opportunity to learn standards are equivalent to school delivery standards as defined by the National Council on Education Standards and Testing (NCEST). These were "the educational standards that set out criteria in such a way that parents, educators, policymakers, and the public can be informed of the quality of a school's capacity and performance in providing quality education for students in subject matter set out by content standards." (Ysseldyke, 1994, page 6). Questions were posed by NCEST in the following areas to assess whether school delivery standards were being met:

- Level of teacher training.
- Availability of high quality instructional materials.
- Quality of match between curriculum and content standards.
- Student performance as an indicator of the school's success at providing opportunity to learn to all students.

Goals 2000 legislation defines opportunity to learn as "the criteria for, and the basis of assessing the sufficiency or quality of the resources, practices, and conditions necessary at each level of the education system to provide all students with the opportunity to learn the material in voluntary national content standards or state content standards." (NCEO, 1995). The Conference Report for the legislation also asks that such standards focus on:

- Quality and availability of curricula, instructional materials, and technologies.
- Teacher capability.
- Continuous professional development for teachers, administrators, and principals.
- Curriculum alignment to national content standards.
- Instructional practices, and assessments of content standards.
- Safety, security, and resources available in the learning environment.
- Non-discriminatory policies, and instructional practices.
- Other factors that help students receive a fair opportunity to achieve the knowledge and skills in the content and performance standards (Rauth, 1994, page 5).

In a 1993 paper, Floraline I. Stevens focused on the teacher's role in opportunity to learn. In a review of international and national studies spanning from 1974 through 1992, opportunity to learn was defined in terms of:

- Content coverage--Whether the students "cover" the content area and the extent to which test content overlaps with curriculum content.
- Content exposure--Time on task as well as time allowed for students to learn the content.
- Content emphasis--Topics selected by teacher for emphasis as well as the selection of students who receive instruction in low or higher order skills.
- Quality of instructional delivery--Teaching practices and their impact on academic achievement.

The author suggests that only by looking inward to instructional and cultural practices and the opportunities to learn and making them available to students can educators determine whether they are providing equitable services to all students.

Another study by Epstein (1992), looked at opportunity to learn in terms of the curriculum offerings, instructional approaches, and their effects on student achievement and behavior. She concluded that educators' decisions about course offerings and instructional approaches have important consequences for student achievement and attitude. Porter (1995), who has written extensively on opportunity to learn would like to include in the definition, "first and foremost, ...a safe and orderly environment for students and educators."

In an earlier article, Porter asserts that the focus for opportunity to learn standards should be "...the direct antecedents of learning, the nature of instruction as it is experienced by students." This includes the content of instruction, the pedagogical quality of instruction, and the resources that are available to student and teachers as instruction takes place. (Porter, 1993b). He goes on to note that content coverage and instructional quality can best predict student achievement.

Traiman (1994), summarizes the debate this way, "arguments on the definition of opportunity to learn standards focus on whether they should address education *inputs*, such as per pupil expenditures, trained teachers, and appropriate textbooks; *processes*, such as instructional and organizational policies and practices; outcomes, such as student performance; or a combination of all three." She lists five differing definitions for opportunity to learn.

1. Opportunity to learn standards should be parsimonious and be limited only to criteria that are directly related to the provision of high-quality curriculum and instruction based on challenging academic standards.
2. Opportunity to learn standards should include other critical factors deemed essential to quality teaching and learning. These factors transcend a narrow interpretation of curriculum and instruction to include safe and drug-free schools, adequate laboratories, libraries, and technology; and indicators of effective schools and professional practice.
3. Opportunity to learn standards should include all of the systemic changes needed for all students to succeed.
4. Opportunity to learn standards should include the actions a state will take if students fail to meet established performance standards.
5. Opportunity to learn standards should provide measures of the adequacy of funding available at each school to help all students achieve (see page 13).

Implications for the Pacific and This Study

Most of the schools in the vast network of Pacific islands served by PREL are remote, and 95 percent have been classified as rural (Lewis, 1992). No previous work on remote and isolated schools has looked at a geographic region such as the Pacific islands, where islands and entities are separated by the ocean and even travel within an island can prove extremely difficult because of large obstacles, hazardous road conditions or lack of infrastructure. Transportation may consist of a fishing boat, field trip ship, or canoe. Sea travel may take place in a calm lagoon, or in rough seas. In some cases, air travel is available; in others a monthly or quarterly ship is the only regular means of transportation. Communication is also an area that has developed unevenly throughout the Pacific region. Telephones are common in Guam and Hawai'i, but scarce to nonexistent in isolated atolls of the Marshall Islands. In some entities, a single sideband radio

provides the only daily communication, and television news from the U.S. mainland, when available, is sometimes more than a week late.

The Pacific R&D Cadre, in consonance with the conclusions of Bass (1980) and d'Plesse (1990), therefore agreed that a combination of variables would be used to characterize the remoteness of schools in this very diverse region. Because many of the variables in previous research did not seem to apply to the Pacific, an extensive study of variables more appropriate to the Pacific region was undertaken. These variables included a school's geographical distance relative to its central DOE office, municipality center, and other locations, as well as geographical barriers to travel to the center, infrastructure for transportation including cost, travel time, type and frequency of available transport, and a variety of communication services.

The R&D Cadre felt that much of the research on opportunity to learn may not be relevant to Pacific communities. Previous research has been theoretical or focused on a limited aspect of the topic such as content coverage. Much of the recent research looked at opportunity to learn in terms of high stakes testing, and school accountability. The Cadre was concerned with the basic issue of *access* to educational opportunities in the region, for the purpose of reaching a better understanding of the types, quantity, and quality of learning opportunities available to Pacific students. As such, an extensive study of variables that includes aspects of Traiman's (1994), definitions number 2 and 3 of opportunity to learn was undertaken. The variables in this study were directly related to "the provision of high-quality curriculum and instruction as well as other critical factors deemed essential to quality teaching and learning," such as the condition of the facilities, availability of equipment, course offerings, staff development, and student services (Traiman, 1994). State policy implementation, local school initiatives, and community support were also included in the study.

III. Methods

This study was conducted by PREL staff members in collaboration with the PREL R&D Cadre. The R&D Cadre is a group of Pacific educators consisting of one member from each department of education in the 10 entities in PREL's service region, two from postsecondary institutions, one private school representative, and one representative from the national government of the Federated States of Micronesia.

The R&D Cadre participated in regular seminars to design the study and the data collection instruments, and to analyze the data collected in each of the seven participating entities. For data collection, Cadre members were assisted by local R&D support groups in each entity. The support groups included school principals and central office staff. These individuals had expertise and access to information required in data collection. On-site training and technical assistance in data collection and data verification was provided by PREL staff. Data were entered into databases in the PREL office and analyses were completed according to general agreements reached in R&D Cadre seminar or in group teleconferences.

Data were collected during the first semester of the 1994-1995 school year. A number of challenges were inherent in this study because of the topic of investigation. Remote and isolated schools are by their very nature difficult to access. Data collection and training were hindered by the inaccessibility of these schools and the lack of resources to get to them and maintain communications on a regular basis. The data collection plan was to include all of the public schools in each of the seven participating entities. Chuuk also requested the inclusion of 10 private schools.

For each school, data were first collected on the School Remoteness/Isolation Survey. Following the completion of the School Remoteness/Isolation Survey, school principals were trained in and completed the School Opportunities to Learn Profile. Each entity also provided information on their public school system's policies and procedures on the Systemwide Policies and Procedures Survey. A copy of each of the instruments is included in the appendix.

The unit of analysis for the study was the individual school. Data were analyzed separately for elementary schools and high schools to determine whether statistical relationships could be found between remoteness and selected indicators of learning opportunities.

Table 1 shows the number of schools from which data were received and analyzed for both the school remoteness survey and learning opportunities survey.

Table 1. Number of Participating Schools in Each Entity

Entity	Elementary	High	Total
American Samoa	19	3	22
CNMI	11	3	14
Palau	14	0	14
Yap	13	0	13
Pohnpei	34	1	35
Chuuk	85	12	97
RMI	34	1	35
Total	210	20	230

Research Questions

The primary research question was:

- *Is there a relationship between the degree of remoteness and isolation of a school and equitable access to learning opportunities in the Pacific region?*

Before this primary question could be answered, two preliminary questions had to be addressed first:

- *How can remoteness be defined and measured in the Pacific context?*
- *What learning opportunities exist in the Pacific region, and how can access to them be measured?*

Instrumentation/Data Sources

The School Remoteness/Isolation Survey focused on dimensions of remoteness and isolation including geographical distance, geographical barriers, infrastructure for transportation and communication services, and the cost of these services.

The School Opportunities to Learn Profile was designed to identify variables associated with opportunities to learn in terms of physical characteristics of the school, academic and instructional characteristics, and administrative policies and procedures.

The Systemwide Policies and Procedures Survey assessed administrative policies for each school system included in the study. Variables, such as policies and procedures related to non-discrimination, mandatory school attendance, teacher/student ratios, systemwide grading systems, systemwide testing systems, systemwide student performance standards, language of instruction, mandated curriculum, teacher certification requirements, and teacher performance standards were explored. Copies of the instruments are included in the Appendix.

Description of the Data Set - Framework for Analysis

Remoteness Indicators and Variables

The R&D Cadre identified several variables as representing remoteness for the purposes of this study. In general, it was very difficult to define remoteness by using any one single measure. However, the single indicators presented in Table 2 were chosen to illustrate certain very specific aspects of remoteness as related to the schools in the study.

Table 2. Single Remoteness Indicators

Single Remoteness Indicators	Definition	Categories
R1. Distance	Distance in miles from the school to the DOE Central office	0-5 5-10 11-100 100+
R2. Transportation	Is some form of public transportation (air, ocean, or ground) available daily?	Yes/No
R3. Communication	Is telephone communication available at the school?	Yes/No

Lengthy discussion within the R&D Cadre pointed out why none of the single indicators listed in Table 2 are adequate to capture the overall degree of remoteness of any school. For example, it was noted that some schools may not have telephones but may have single sideband radios, which keep them in touch with the outside world just as well. There were many problems associated with the Distance indicator also. Some schools, for example, may be only a few miles from DOE Central, but on the other side of a mountain range with no connecting roads. Other schools may be hundreds of miles away, but with reliable and frequent air transportation. As a result of these discussions, a composite remoteness indicator was designed by the R&D Cadre. The composite remoteness indicators, presented in Table 3, combine distance, transportation and communication, but uses slightly different forms of single indicators than described in Table 2.

Table 3. Composite Remoteness Indicators

Composite Score Based on Three Remoteness Variables:	Definition	Categories
Distance	Distance in miles from the school to the DOE Central office	Near = <50 miles from DOE; Far = >50 miles from DOE
Transportation	Is some form of public transportation (air, ocean, or ground) available daily?	Yes/No
Easy Communication	Are any of the following available: telephone, cellular, single sideband, or CB radio?	Yes/No

In the composite remoteness scale presented in Table 4, the ranking of 1 is considered least remote. Schools with a ranking of 1 are near, they have easy communication, and there is some form of daily transportation. A school with a score of 8 would be most remote: far from the DOE, with no communication and no daily transportation. Availability of communication and transportation are given more weight in this scale than distance. In other words, even if a school is distant, it is not considered remote if it has easy communication and daily transportation available.

For example, there is an elementary school in Pohnpei located in the mountains, less than 5 miles from the central DOE office. While this school is quite "near", there is no road available, and there is no daily communication. In fact, there is no electricity at all. This school received a score of 7 for "very remote", on the composite remoteness scale. In contrast, a high school in American Samoa is located on an outer island more than 65 miles away from the DOE central office. While this school is quite "far", there is reliable air transportation twice daily, and easy communication through telephone and fax. This school received a score of 2 on the composite remoteness scale.

Table 4. Composite Remoteness Scale

Remoteness Ranking	Distance	Transportation	Communication
1	Near	Yes	Yes
2	Far	Yes	Yes
3	Near	No	Yes
4	Near	Yes	No
5	Far	No	Yes
6	Far	Yes	No
7	Near	No	No
8	Far	No	No

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This composite remoteness scale is used as the predictor or independent variable in the statistical analyses in this report. The analyses look at the degree of relationship between this scale and the ALO indicators described in Table 5. For the elementary school analyses, the full 8-point scale is used. For the high school analyses, the numbers of schools are so small that the scale had to be reduced to a dichotomous (2-point) scale. High schools with composite remoteness rankings of 1-4 were considered "near," and schools with rankings of 5-8 were considered "far."

Access to Learning Opportunities Indicators and Variables

The R&D Cadre identified the following 25 indicators as representing access to learning opportunities for the purposes of this study.

Table 5. Access to Learning Opportunities Indicators

Type	ALO Indicators	Variables for Analysis	Presented in Categories
Faculty and Staff	A1. Student/Teacher Ratio	Number of students; Number of teachers	10 or less students/teacher 11-20 students/teacher 21-30 students/teacher 31-40 students/teacher 40+ students/teacher
	A2. Student/ Certified Teacher Ratio	Number of students; Number of certified teachers	10 or less students/teacher 11-20 students/teacher 21-30 students/teacher 31-40 students/teacher 40+ students/teacher
	A3. Teachers Education Level: BA or higher	Percent of teachers with a BA or higher	25% & less 26-50% 51-75% 75% +
	A4. Teachers Education Level: AA or AS or higher	Percent of Teachers with a AA or As or higher	25% & less 26-50% 51-75% 75% +
	A5. Local Teachers	Percent of teachers who are local	20% & less 20-40% 40-60% 60-80% 80% +
	A6. Teaching Experience	Total average years of teaching experience of teachers	1-2 years 3-5 years 6-10 years 11-15 16 years +

(Table 5 continued)

Table 5. Access to Learning Opportunities Indicators (cont.)

Type	ALO Indicators	Variables for Analysis	Presented in Categories
Curriculum	A7. Core Courses	Does the school offer the core courses (Language Arts, Math, Science, Social Science) every year?	Yes/No
	A8. Books/Students Ratio: Language Arts	Ratio of language arts books to students in school	1 student/book (100%) 2-5 students/book 6-10 students/book >10 students/book No textbooks
	A9. Books/ Students Ratio: Mathematics	Ratio of mathematics books to students in school	1 student/book (100%) 2-5 students/book 6-10 students/book >10 students/book No textbooks
	A10. Books/ Students Ratio: Science	Ratio of science books to students in school	1 student/book (100%) 2-5 students/book 6-10 students/book >10 students/book No textbooks
	A11. Books/ Students Ratio: Social Science	Ratio of social science books to students in school	1 student/book (100%) 2-5 students/book 6-10 students/book >10 students/book No textbooks
	A12. Supplementary Materials	Are supplementary materials available?	Yes/No
Instructional Equipment	A13. Computers	Number of computers in school	No computers 1-5 computers 6-10 computers 11-20 computers 21 + computers
	A14. Televisions	Number of televisions available in the school	No TV 1-5 TVs 6-10 TVs
Student Services	A15. Student Services	Total number of types of student services	No services 1-5 types 6-10 types 11-20 types 21+ types
	A16. Special Education	Does the school offer special education services (if there are eligible students)?	Yes/No
	A17. Counseling	Does the school offer at least one of the following four types of counseling services? (Academic, post-secondary education, life-skills, or career counseling).	Yes/No

(Table 5 continued)

Table 5. Access to Learning Opportunities Indicators (cont.)

Type	ALO Indicators	Variables for Analysis	Presented in Categories
Policy Implementation	A18. Student Assessment	Does the school implement the entity's system-wide policy on student testing?	Yes/No
	A19. Modified Attendance Policy	Does the school have a mandatory systemwide school attendance policy, modified to meet the needs of the school community?	Yes/No
	A20. Language Policy	Does the school implement the entity's system-wide language or medium of instruction policies?	Yes/No
	A21. Central Office Visits to Schools	Was the school visited at least once by Central Office staff for classroom purposes in the past year?	Yes/No
	A22. Staff Development	Are activities for staff development present?	Yes/No
	A23. School Improvement Plan	Does the school have a school improvement plan as well as a focus area?	Yes/No
Community Support	A24. Parent/Teacher Association	Does the school have a PTA and is the percentage of families attending meetings over 50 percent?	Yes/No
	A25. Other Schools	Are there other schools serving students and families in the school community?	Yes/No

Statistical Procedures

The following procedures and guidelines were used to determine whether these 25 indicators are related to the remoteness of the school. First, due to data limitations, only the most robust statistics were used. The predictor, or independent variable, was the 8-point composite remoteness scale. When the independent variable, or ALO indicator, was based on a continuous scale, an Analysis of Variance (ANOVA) procedure was used. When the ALO indicator was a categorical scale, the Chi Square test was used. These procedures were used throughout with elementary schools. With high schools, however, small numbers precluded the use of these methods. Instead, the composite remoteness scale was compressed into a 2-point scale (scores of 1-4 became "near" and scores of 5-8 became "far"). If it was not already a 2-point scale, each of the ALO indicators was also reduced to a 2-point scale at, or near the midpoint of the scale. This permitted the use of Fisher's Exact Test to test each indicator.

IV. Findings

This section presents the general findings related to remoteness and shows how the schools scored on the remoteness indicators. The findings on ALO indicators are presented next. Elementary and high schools will be examined separately. Statistics showing the relationship of each ALO indicator to the composite remoteness score are presented for each. Because all schools did not answer all of the questions on the survey, there is some data missing. The total number of schools in the tables does not always add up to the total number of schools in the study.

Remoteness Indicators

Single Remoteness Indicators

The findings on the simple, single, remoteness indicators (R1-R3) are presented first. As previously mentioned these findings should not be construed as a description of the entire situation. Nevertheless, they point out some facts about schools in the region in general.

R1. Distance--What is the distance in miles to the DOE Central Office?

Table 6. Distance

Miles	Frequency (Number of Schools)	Percent
0-5	47	21.2
5-10	56	22.1
11-100	70	31.5
100 +	49	25.2

The breakdown presented in Table 6 shows a relatively even distribution of schools in the study. One-fifth of all the schools are within five miles of the DOE headquarters, yet fully one-fourth of the schools are more than 100 miles away. Simple mileage does not indicate whether the school is on the same island, is on a different island but within the reef, or over open ocean. It does not reveal the condition of, or lack of roads if the school is on the same island. Distance by itself is relatively meaningless.

R2. Daily Transportation--Is some form of transportation (air, ocean, or ground) available daily?

Table 7. Daily Transportation

Transportation?	Frequency (Number of Schools)	Percent
No	162	73.0
Yes	60	27.0

Of note in Table 7 is that almost three-quarters of the schools report they have no daily transportation available. This may be explained by the question that was specifically asked to obtain information about daily *public* transportation. Respondents who drive private cars may have responded negatively to this question. In addition, many relatively near schools report no transportation, but they are within walking or easy access distance from the school.

R3. Telephone Communication--Is a telephone available at the school?

Table 8. Telephone Communication

Phone?	Frequency (Number of Schools)	Percent
No	122	55.0
Yes	100	45.0

The telephone is one of the most basic forms of communication. More than half of the schools in this study (Table 8) have no telephone. The R&D Cadre pointed out that other forms of direct communication, such as single sideband and CB radio, may place a school in touch with the outside world. This is taken into account in the composite scale. Nonetheless, given the ubiquity of the telephone in schools within the United States, the proportion of schools in this study with no phone at all is meaningful.

Composite Remoteness Scale

The number of schools in the study that received scores on the remoteness scale of from 1 (least remote) to 8 (most remote) are presented in Table 9.

R4. Composite Remoteness Score - Distance: Near or Far; Daily Transportation: Yes or No; and Easy Communication: Yes or No.

Table 9. Composite Remoteness Scores

Remoteness Ranking	Frequency (Number of Schools)	Percent
1	47	21.2
2	6	2.7
3	48	21.6
4	5	2.3
5	56	25.2
6	2	0.9
7	49	22.1
8	9	4.1

This scale does divide the schools relatively evenly--about half of the schools get scores of 1-4, and about half, scores of 5-8. Therefore, the percentage of schools that are less remote and more remote by this scale are approximately the same. There does not seem to be a simple reason why there are more schools in certain rankings and fewer in others.

In summary, the schools involved in this study, which are generally representative of the region as a whole, show an overall pattern of remoteness. While distances are not always great, the fact that so many schools have no daily public transportation, and that over half have no telephone means that *many* schools may be considered quite remote. It is difficult to assign a single remoteness score, but the composite scale presented here is an attempt to take all three variables--distance, transportation, and communication--into account. In future research, it would be desirable to include a question inquiring about the degree of *felt* remoteness--to get at the psychological factor of how isolated people at these schools feel.

Access to Learning Opportunities Indicators

From the many questions asked of schools in this study, the R&D Cadre selected 25 variables as indicators of Access to Learning Opportunities (ALO). These ALO indicators are intended to provide a range of insight into the quality of the educational experience. As with Remoteness, no one indicator can fully express this complex phenomenon. Several of the indicators selected are composites of other variables.

In analyzing the results for these indicators, an important distinction had to be made between elementary and secondary level schools. The Cadre decided to do a parallel analyses of the indicators, one for elementary and one for secondary level schools.

Before discussing each of the ALO variables, then, a set of basic figures should be presented. These are not, in themselves, ALO indicators, but they underlie some of the selected ALO indicators. They include the number of elementary and secondary level schools (see Table 10), and the number of students and teachers in each.

Basic Variables

Table 10. Number of Elementary and Secondary Schools

Type of School	Frequency	Percent
Elementary	210	91.4
High School	20	8.6

Numerically, there are far more elementary schools represented in the region and in this study than high schools. This is one reason why it makes more sense to examine the effects of remoteness on elementary schools and high schools separately (see Tables 11 through 14).

Table 11. Number of Students: Elementary

Number of Students	Frequency	Percent
100 & less	79	38.9
101-500	106	52.2
501-1000	15	7.4
1000 +	3	1.5

Table 12. Number of Students: High School

Number of Students	Frequency	Percent
100 & less	3	15.0
101-500	11	55.0
501-1000	2	10.0
1000 +	4	20.0

A majority, 52 percent of elementary schools and 55 percent of high schools, have between 101 and 500 students. More than a third of the elementary schools have 100 or fewer students. In terms of percentage, there are more very large (1000+) high schools than very large elementary schools.

Table 13. Number of Teachers: Elementary

Number of Teachers	Frequency	Percent
5 & less	65	32.2
6-10	73	36.1
11-20	43	21.3
21-30	9	4.5
30 +	12	5.9

Table 14. Number of Teachers: High School

Number of Teachers	Frequency	Percent
5 & less	3	15.0
6-10	2	10.0
11-20	8	40.0
21-30	4	20.0
30 +	3	15.0

About one-third of all elementary schools have five or fewer teachers; more than two-thirds have 10 or fewer.

Frequency Distributions and Statistical Findings

In Tables 15-89, the results are presented in frequency distributions for near and far elementary and high schools. The statistics related to composite remoteness for each of the ALO indicators are broken down by the categories given in Table 5. Schools with composite remoteness rankings of 1-4 were considered "near," and schools with rankings of 5-8 were considered "far." Because of the variability in school responses, there is some data missing. The total number of schools in the tables does not always add up to the total number of schools in the study.

A1. Student/Teacher Ratio

Table 15. Student/Teacher Ratio: Elementary

Student/Teacher Ratio	Near	Far	Total	Total Percent
10 or fewer	19	30	49	24.1
11-20	30	55	85	41.9
21-30	37	17	54	26.6
31-40	7	6	13	6.4
40 +	2	0	2	1.0
TOTAL	95	108	203	100

Table 16. Student/Teacher Ratio: High School

Student/Teacher Ratio	Near	Far	Total	Total Percent
10 or fewer	4	3	7	35.0
11-20	9	2	11	55.0
21-30	2	0	2	10.0
31-40	0	0	0	0
40 +	0	0	0	0
TOTAL	15	5	20	100

The schools in this study illustrate the great diversity among schools in the Pacific region. A high percentage of both elementary and high schools have low student/teacher ratios. Approximately 35 percent of the high schools and 24 percent of the elementary schools have ratios of 10 students or fewer per teacher.

Table 17. Statistics Related to Composite Remoteness for A1

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	F = 1.59	7	.1408	No
High School	Fisher's Exact Test			1.000	No

Statistically, this indicator is not related to remoteness at the elementary or high school level. A close look at the data, however, shows that the more remote schools actually have lower student teacher ratios. For example, 78, or approximately 73 percent of the elementary schools that are remote have student/teacher ratios of 10 or less. The explanation is probably that the more remote elementary schools are the ones with the fewest students, and therefore, very low student/teacher ratios.

A2. Student/Certified Teacher Ratio

Table 18. Student/Certified Teacher Ratio: Elementary

Student/Teacher Ratio	Near	Far	Total	Total Percent
10 or less	24	33	57	28.1
11-20	22	38	60	29.6
21-30	26	20	46	22.7
31-40	8	6	14	6.9
40 +	15	11	26	12.8
TOTAL	95	108	203	100

Table 19. Student/Certified Teacher Ratio: High School

Student/Teacher Ratio	Near	Far	Total	Total Percent
10 or fewer	2	2	4	20.0
11-20	9	2	11	55.0
21-30	2	1	3	15.0
31-40	1	0	1	5.0
40 +	1	0	1	5.0
TOTAL	15	5	20	100

As might be expected, there are more schools with higher student/certified teacher ratio (Tables 18 and 19) compared with overall student/teacher ratio (A1). It is still true, however, that the student/certified teacher ratios are quite low for most elementary and secondary schools. Over half of all elementary schools and three-fourths of high schools have ratios of 20 students per certified teacher or fewer.

Table 20. Statistics Related to Composite Remoteness for A2

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	F = 4.25	6	.0005	Yes
High School	Fisher's Exact Test			1.000	No

For certified teachers, the relationship to remoteness is statistically significant at the elementary, not the high school level. As with overall student/teacher ratio, many of the remote elementary schools actually have low student/certified teacher ratios. Again, this is probably because of the very low number of students at some of the more remote schools. At the high school level the relationship is not so strong. High schools tend not to be remote and the overall student ratios are low.

A3. Teachers Education Level: BA or Higher

Table 21. Percent of Teachers with BA: Elementary

Percent with BA	Near	Far	Total	Total Percent
25% & fewer	71	97	168	83.2
25-50%	12	7	19	9.4
50-75%	6	2	8	4.0
75% +	6	1	7	3.5
TOTAL	95	107	202	100

Table 22. Percent of Teachers with BA: High School

Percent with BA	Near	Far	Total	Total Percent
25% & fewer	8	2	10	50.0
25-50%	1	2	3	15.0
50-75%	3	0	3	15.0
75% +	3	1	4	20.0
TOTAL	15	5	20	100

As shown in Tables 21 and 22, high schools are more likely to have teachers with BA degrees. More than 80 percent of the elementary schools have relatively few teachers with a BA, and only 3.5 percent have a high percentage (75 percent or more) of BA level staff. By contrast, 20 percent of the high schools have a high percentage of BA level teachers.

Table 23. Statistics Related to Composite Remoteness for A3

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	5.28	7	.0001	Yes
High School	Fisher's Exact Test			1.000	No

As table 23 indicates, level of teachers' education is significantly related to remoteness for elementary schools, not for high schools. Near elementary schools are more likely to have a higher percentage of teachers with bachelor degrees. This is true for only a very few schools. The more important finding is how many elementary schools overall have a low percentage of BA level teachers.

A4. Teachers Education Level: AA or AS or Higher

Table 24. Percentage of Teachers with AA or AS: Elementary

Percentage with AA/ AS	Near	Far	Total	Total Percent
25% & fewer	32	26	58	28.7
25-50%	13	25	38	18.8
50-75%	18	23	41	20.3
75% +	32	33	65	32.2
TOTAL	95	107	202	100

Table 25. Percentage of Teachers with AA or AS: High School

Percentage with AA/ AS	Near	Far	Total	Total Percent
25% & fewer	7	1	8	40.0
25-50%	2	1	3	15.0
50-75%	2	2	4	20.0
75% +	4	1	5	25.0
TOTAL	15	5	20	100

In contrast with the BA level findings, as shown in Table 24, elementary schools have a relatively higher level of teachers with AA or AS level education. For both elementary and high schools, however, quite high percentages of schools, between one-fourth and one-third, have staffs with AA or AS degree level of education.

Table 26. Statistics Related to Composite Remoteness for A4

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	2.54	6	.0221	Yes
High School	Fisher's Exact Test			.617	No

Again, this educational level is statistically related (at the .05 level) to remoteness for elementary but not for high schools (see Table 26). Slightly more elementary schools have a high percentage of AA level teachers at more remote sites.

A5. Local Teachers

Table 27. Percent of Teachers who are Local: Elementary

Student/Teacher Ratio	Near	Far	Total	Total Percent
20% & fewer	11	10	21	10.4
20-40%	2	0	2	1.0
40-60%	0	1	1	0.5
60-80%	8	1	9	4.5
80% +	74	95	169	83.7
TOTAL	95	107	202	100

Table 28. Percent of Teachers who are Local: High School

Student/Teacher Ratio	Near	Far	Total	Total Percent
20% & fewer	4	1	5	25.0
20-40%	0	1	1	5.0
40-60%	2	0	2	10.0
60-80%	1	0	1	5.0
80% +	8	3	11	55.0
TOTAL	15	5	20	100

As presented in Tables 27 and 28, high schools and elementary schools have a very high percentage of local teachers. The percentage is much higher at the elementary level, however, with more than 80 percent of the schools with more than 80 percent local teachers. Although a high percent of local teachers is the norm, one-quarter of the high schools have a very non-local (under 20 percent) staff. High schools in the region, then, tend to be more mixed than elementary schools in terms of local teachers.

Table 29. Statistics Related to Composite Remoteness for A5

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	3.16	7	.0035	Yes
High School	Fisher's Exact Test			1.000	No

While most elementary schools have local teaching staffs, the effect is significantly related to remoteness, with the most remote schools having the most local teachers. The relationship is not significant at the high school level (see Table 29).

A6. Teaching Experience

Table 30. Average Years of Teaching Experience: Elementary

Teaching Experience	Near	Far	Total	Total Percent
1-2 years	4	14	18	9.0
3-5 years	2	4	6	3.0
6-10 years	43	22	65	32.7
11-15 years	45	52	97	48.7
16 years +	1	12	13	6.5
TOTAL	95	107	199	100

Table 31. Average Years of Teaching Experience: High School

Teaching Experience	Near	Far	Total	Total Percent
1-2 years	3	0	3	15.0
3-5 years	1	0	1	5.0
6-10 years	8	2	10	50.0
11-15 years	3	3	6	30.0
16 years +	0	0	0	0
TOTAL	15	5	20	100

As shown in Tables 30 and 31, elementary schools tend to have a more experienced teaching staff than high schools. For most elementary schools, the average number of years of experience is 11-15 years. In high schools, it is 6-10 years.

Table 32. Statistics Related to Composite Remoteness for A6

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	F = 4.98	6	.0001	Yes
High School	Fisher's Exact Test			.131	No

As shown in Table 32, the relationship of teaching experience to remoteness is statistically significant at the elementary school level. The pattern is an interesting one. There are more remote elementary schools with both low teaching experience (1-2 years) and high teaching experience (16+ years). There are more near elementary schools with medium number of years of experience (6-10 years). This effect is not statistically significant for high schools.

A7. Core Courses--Are each of the core courses, Math, Science, Language Arts, and Social Science offered every year?

Table 33. Core Courses: Elementary

Yes/No	Near	Far	Total	Total Percent
No	33	34	67	33.2
Yes	62	73	135	66.8
TOTAL	95	107	202	100

Table 34. Core Courses: High School

Yes/No	Near	Far	Total	Total Percent
No	6	3	9	45.0
Yes	9	2	11	55.0
TOTAL	15	5	20	100

At both elementary and high school, most schools offer the four core courses (Language Arts, Math, Science, and Social Science) at every grade level (see Tables 33 and 34). However, 45 percent of elementary schools and close to one-half of high schools do not.

Table 35. Statistics Related to Composite Remoteness for A7

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi-Square	.161	1	.688	No
High School	Fisher's Exact Test			.617	No

The indicator shown in Table 35 is not statistically related to remoteness. The percentage of elementary and high schools that offer core courses every year is approximately the same regardless of whether they are near or far.

A8. Ratio of Books to Students: Language Arts

Table 36. Ratio of Books to Students, Language Arts: Elementary

Ratio	Near	Far	Total	Total Percent
1 (100%)	36	16	52	27
2-5 (shared)	13	18	31	16
6-10 (shared)	2	0	2	1
>10 (shared)	3	7	10	5
No textbooks	37	61	98	51
TOTAL	91	102	193	100

Table 37. Ratio of Books to Students, Language Arts: High School

Ratio	Near	Far	Total	Total Percent
1 (100%)	5	1	6	30
2-5 (shared)	1	1	2	10
6-10 (shared)	0	0	0	0
>10 (shared)	0	1	1	5
No textbooks	9	2	11	55
TOTAL	15	5	20	100

The two key implications of the data presented in Tables 36 and 37 are lack and variability. Lack of textbooks is evident in that more than 50 percent of both elementary and high schools report having no Language Arts textbooks. Variability is evident in that the second highest percentage of both report that they have one book for every student: a one-to-one ratio. These findings apply to the books-to-students ratios for Math, Science, and Social Science as well. The type of textbook that is most lacking is in Social Science, followed by Science.

Table 38. Statistics Related to Composite Remoteness for A8

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi-Square	39.742	28	.070	No
High School	Fisher's Exact			1.000	No

As shown in Table 38, books-to-student ratio in Language Arts is not significantly related to remoteness for elementary schools, and high schools. However, it is important to note that more than 100 schools have no Language Arts textbooks at all regardless of remoteness.

A9. Ratio of Books to Students: Mathematics

Table 39. Ratio of Books to Students, Math: Elementary

Ratio	Near	Far	Total	Total Percent
1 (100%)	41	20	61	32
2-5 (shared)	15	17	32	17
6-10 (shared)	1	1	2	1
>10 (shared)	5	2	7	4
No textbooks	29	62	91	47
TOTAL	91	102	193	100

Table 40. Ratio of Books to Students, Math: High School

Ratio	Near	Far	Total	Total Percent
1 (100%)	5	1	6	30
2-5 (shared)	1	1	2	10
6-10 (shared)	0	0	0	0
>10 (shared)	0	1	1	5
No textbooks	9	2	11	55
TOTAL	15	5	20	200

Table 41. Statistics Related to Composite Remoteness for A9

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi-Square	45.064	28	.022	Yes
High School	Fisher's Exact			1.000	No

Books-to-student ratio in Math is significantly related to remoteness for elementary schools, but not for high schools (see Table 41). Near elementary schools are more likely to have a one-to-one book-to-student ratio than far elementary schools. The same is true for high schools. However, like the ratio for Language Arts, more than 100 schools have no Math textbooks at all, regardless of remoteness. Similar results were obtained for Science and Social Science. Tables 42-47 illustrate the similarities among these subject areas.

A10. Ratio of Books to Students: Science

Table 42. Ratio of Books to Students, Science: Elementary

Ratio	Near	Far	Total	Total Percent
1 (100%)	28	18	46	24
2-5 (shared)	14	9	23	12
6-10 (shared)	3	3	6	3
>10 (shared)	8	5	13	7
No textbooks	38	67	105	54
TOTAL	91	102	193	100

Table 43. Ratio of Books to Students, Science: High School

Ratio	Near	Far	Total	Total Percent
1 (100%)	5	1	6	30
2-5 (shared)	1	1	2	10
6-10 (shared)	0	0	0	0
>10 (shared)	0	1	1	5
No textbooks	9	2	11	55
TOTAL	15	5	20	100

Table 44. Statistics Related to Composite Remoteness for A10

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi-Square	22.170	28	.773	No
High School	Fisher's Exact			1.000	No

(Results similar to variable A9)

A11. Ratio of Books to Students: Social Science

Table 45. Ratio of Books to Students, Social Science: Elementary

Ratio	Near	Far	Total	Total Percent
1 (100%)	30	10	40	21
2-5 (shared)	9	14	23	12
6-10 (shared)	4	2	6	3
>10 (shared)	6	7	13	7
No textbooks	42	69	111	58
TOTAL	91	102	193	100

Table 46. Ratio of Books to Students, Social Science: High School

Ratio	Near	Far	Total	Total Percent
1 (100%)	3	1	6	30
2-5 (shared)	1	1	2	10
6-10 (shared)	0	0	0	0
>10 (shared)	1	1	1	5
No textbooks	10	2	11	55
TOTAL	15	5	20	100

Table 47. Statistics Related to Composite Remoteness for A11

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi-Square	29.212	28	.402	No
High School	Fisher's Exact			1.000	No

(Results similar to variable A9)

A12. Supplementary Materials--Are supplementary materials available?

Table 48. Supplementary Materials: Elementary

Yes/No	Near	Far	Total	Total Percent
No	18	35	53	68.8
Yes	17	7	24	31.2
TOTAL	35	42	77	100

Table 49. Supplementary Materials: High School

Yes/No	Near	Far	Total	Total Percent
No	5	3	8	80.0
Yes	1	1	2	20.0
TOTAL	6	4	10	100

The indicator presented in Tables 48 and 49 looked at whether supplementary materials other than those in the core areas are available. Few elementary or high schools have such supplementary materials. Only 20 percent of high schools have such materials, while only 31 percent of elementary schools do. Note, however, that less than half of the schools provided an answer to this particular question.

Table 50. Statistics Related to Composite Remoteness for A12

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi-Square	28.053	1	.0001	Yes
High School	Fisher's Exact Test			1.000	No

In terms of statistical significance this indicator is strongly related to remoteness for elementary schools (see Table 50). The near schools are more likely to have supplementary materials than the far schools. There is no relationship to remoteness for high schools.

A13. Number of Computers

Table 51. Computers: Elementary

Number	Near	Far	Total	Total Percent
No Computer	60	100	160	79.2
1-5	16	1	17	8.4
6-10	4	1	5	2.5
11-20	6	0	6	3.0
21 +	9	5	14	6.9
TOTAL	95	107	202	100

Table 52. Computers: High School

Number	Near	Far	Total	Total Percent
No Computer	8	3	11	55.0
1-5	1	2	3	15.0
6-10	2	0	2	10.0
11-20	3	0	3	15.0
21 +	1	0	1	5.0
TOTAL	15	5	20	100

As shown in Tables 51 and 52, high schools are ahead of elementary schools in terms of computer availability, although for both it is most common to have no computers at all. At the elementary level it is still uncommon to have any computers--80 percent have none. A small minority, 14 elementary schools or 7 percent, have 21 or more computers. At the high school level some computers are available in approximately 45 percent of the schools.

Table 53. Statistics Related to Composite Remoteness for A13

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	F = 4.91	7	.0001	Yes
High School				.542	No

Statistically, there is a relationship between remoteness and computers at the elementary school level (see Table 53). The near schools are more likely to have at least some computers. Overall, however, very few schools, near or far, have any computers. At high school there is no relationship between remoteness and computers.

A14. Televisions--Number of television sets available in the school.

Table 54. Televisions: Elementary

Number	Near	Far	Total	Total Percent
No TV	53	98	151	74.4
1-5	39	9	48	23.6
6-10	3	1	4	2.0
TOTAL	95	108	203	100

Table 55. Televisions: High School

Number	Near	Far	Total	Total Percent
No TV	6	4	10	50.0
1-5	8	1	9	45.0
6-10	1	0	1	5.0
TOTAL	15	5	20	100

Television is not generally available in the region at either elementary or high school (see Tables 54 and 55). Approximately three-quarters of the elementary schools and one-half of the high schools have no television at all. In general, high schools are more likely to have at least some TVs than are elementary.

Table 56. Statistics Related to Composite Remoteness for A14

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	F = 2.82	7	.0080	Yes
High School	Fisher's Exact Test			.478	No

The relationship with remoteness is statistically significant at the elementary, not at the high school level (see Table 56). Near elementary schools are more likely to have some TVs. Far elementary schools are more likely to have none.

A15. Student Services

Table 57. Number of Types of Student Services: Elementary

Number	Near	Far	Total	Total Percent
No Services	6	20	26	12.9
1-5	49	74	123	60.9
6-10	22	7	29	14.4
11-20	16	4	20	9.9
21 +	2	2	4	2.0
TOTAL	95	107	202	100

Table 58. Number of Types of Student Services: High School

Number	Near	Far	Total	Total Percent
No Services	1	0	1	5.0
1-5	5	2	7	35.0
6-10	1	1	2	10.0
11-20	7	1	8	40.0
21 +	1	1	2	10.0
TOTAL	15	5	20	100

Almost all schools in the study, elementary and high schools, have at least some minimal types of student services (see Tables 57 and 58). Only 13 percent of elementary schools and one high school (out of 20) have none.

Table 59. Statistics Related to Composite Remoteness for A15

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	ANOVA	F = 8.70	7	.0001	Yes
High School	Fisher's Exact Test			.558	No

Remoteness is definitely a factor affecting availability of student services at elementary schools (see Table 59). Of the 26 elementary schools with no student services, 20 are remote. The near schools are more likely to have more student services.

A16. Special Education--Is special education available?

Table 60. Special Education: Elementary

Yes/No	Near	Far	Total	Total Percent
No	34	88	122	60.4
Yes	61	19	80	39.6
TOTAL	95	107	202	100

Table 61. Special Education: High School

Yes/No	Near	Far	Total	Total Percent
No	9	3	12	60.0
Yes	6	2	8	40.0
TOTAL	15	5	20	100

Sixty percent of the schools in this study (Tables 60 and 61) do not offer special education services. This percentage is consistent at both elementary and high school levels.

Table 62. Statistics Related to Composite Remoteness for A16

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	45.399	1	.0001	Yes
High School	Fisher's Exact Test			1.000	No

A very strong statistical relationship exists between remoteness and special education at the elementary level (see Table 62). Near schools are far more likely to offer special education. Far schools are much more likely to have no special education.

A17. Counseling--Does the school offer academic, post-secondary education, life-skills, or career counseling?

Table 63. Counseling: Elementary

Yes/No	Near	Far	Total	Total Percent
No	60	92	152	75.2
Yes	35	15	50	24.8
TOTAL	95	107	202	100

Table 64. Counseling: High School

Yes/No	Near	Far	Total	Total Percent
No	6	3	9	45.0
Yes	9	2	11	55.0
TOTAL	15	5	20	100

As shown in Tables 63 and 64 there is a big difference between elementary and high schools on this indicator. At least some form of counseling is offered in 55 percent of the high schools but at the elementary level, it is offered in only 25 percent of the schools.

Table 65. Statistics Related to Composite Remoteness for A17

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	14.074	1	.0001	Yes
High School	Fisher's Exact Test			.617	No

The statistical relationship between remoteness and counseling at the elementary school level means that elementary schools that offer counseling are more likely to be the close ones (see Table 65). Of 50 schools that offer some form of counseling, 35 are near. At the high school level remote and non-remote schools are about equally likely to offer counseling.

A18. Student Assessment--Does the school implement the entity's system-wide policy on testing?

Table 66. Student Assessment: Elementary

Yes/No	Near	Far	Total	Total Percent
No	7	24	31	16.7
Yes	83	72	155	83.3
TOTAL	90	96	186	100

Table 67. Student Assessment: High School

Yes/No	Near	Far	Total	Total Percent
No	2	0	2	11.1
Yes	11	5	16	88.9
TOTAL	13	5	18	100

Most schools in the study report that they do implement the statewide student testing policy (see Tables 66 and 67). Only 16 percent of elementary and 11 percent of high schools do not.

Table 68. Statistics Related to Composite Remoteness for A18

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	9.920	1	.002	Yes
High School	Fisher's Exact Test			1.000	No

Again, remoteness is significantly related to this indicator at the elementary school level (see Table 68). The more remote schools are less likely to implement the testing policy. Of the 31 schools which do not implement the testing policy, 24 are remote.

A19. Modified Attendance Policy--Does the school have a system-wide attendance policy modified to meet community needs?

Table 69. Modified Attendance Policy: Elementary

Yes/No	Near	Far	Total	Total Percent
No	37	59	96	53.3
Yes	49	35	84	46.7
TOTAL	86	94	180	100

Table 70. Modified Attendance Policy: High School

Yes/No	Near	Far	Total	Total Percent
No	11	3	14	77.8
Yes	2	2	4	22.2
TOTAL	13	5	18	100

As shown in Tables 69 and 70, only 47 percent of elementary and 22 percent of high schools report having a modified attendance policy. Over three-fourths of the high schools do not have this type of attendance policy. Because the question was specifically asked to obtain information about a policy *modified* to meet the needs of the school community, it is possible that "no" respondents either didn't have a policy or had one that had not been modified.

Table 71. Statistics Related to Composite Remoteness for A19

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	7.033	1	.008	Yes
High School	Fisher's Exact Test			.533	No

Remoteness is again significantly related to this indicator at elementary school (see Table 71). The more remote schools are less likely to have a modified attendance policy. Of the 96 schools that do not have a policy, 59 are remote. At the high school level, while there is no statistical relationship, it may be noteworthy that 11 of the 13 near schools do not have a modified attendance policy.

A20. Language Policy--Does the school implement the entity's system-wide policy on language or medium of instruction?

Table 72. Language Policy: Elementary

Yes/No	Near	Far	Total	Total Percent
No	13	29	42	23.5
Yes	76	61	137	76.5
TOTAL	89	90	179	100

Table 73. Language Policy: High School

Yes/No	Near	Far	Total	Total Percent
No	3	1	4	22.2
Yes	10	4	14	77.8
TOTAL	13	5	18	100

Most schools report implementing the statewide language of instruction policies (see Tables 72 and 73). Just over three-fourths of elementary and high schools implement this policy. More than one-fifth of both schools do not implement this policy.

Table 74. Statistics Related to Composite Remoteness For A20

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	7.732	1	.005	Yes
High School	Fisher's Exact Test			1.000	No

Near elementary schools are more likely to implement the language policy (see Table 74). Far elementary schools are more likely not to. This relationship is statistically significant. At the high school level, far and near schools are equally likely to implement the language policy.

A21. Central Office Visits to Schools--Was the school visited at least once by the central DOE for classroom purposes?

Table 75. Central Office Visits: Elementary

Yes/No	Near	Far	Total	Total Percent
No	45	69	114	56.4
Yes	50	38	88	43.6
TOTAL	95	107	202	100

Table 76. Central Office Visits: High School

Yes/No	Near	Far	Total	Total Percent
No	6	2	8	40.0
Yes	9	3	12	60.0
TOTAL	15	5	20	100

As shown in Tables 75 and 76, high schools are more likely than elementary schools to receive at least one visit during the year from the Central DOE staff for some purpose related to the classroom (and not for ceremonial or administrative purposes). Still, a sizable percentage of all schools do not receive such visits--56 percent of elementary and 40 percent of high schools.

Table 77. Statistics Related to Composite Remoteness for A21

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	5.997	1	.014	Yes
High School	Fisher's Exact Test			1.000	No

The near elementary schools are more likely than the far schools to receive DOE visits for classroom purposes (see Table 77). At high school level, the same proportion of schools that are considered near and far receive this kind of DOE visit.

A22. Staff Development--Are activities for staff development present?

Table 78. Staff Development: Elementary

Yes/No	Near	Far	Total	Total Percent
No	38	68	106	52.5
Yes	57	39	96	47.5
TOTAL	95	107	202	100

Table 79. Staff Development: High School

Yes/No	Near	Far	Total	Total Percent
No	9	4	13	65.0
Yes	6	1	7	35.0
TOTAL	15	5	20	100

Tables 78 and 79 illustrate that more elementary than high schools have at least some staff development activities. However, more than half of both levels of school have no staff development activities--53 percent of elementary and 65 percent of high schools.

Table 80. Statistics Related to Composite Remoteness for A22

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	11.192	1	.001	Yes
High School	Fisher's Exact Test			.613	No

The statistical relationship between remoteness and staff development is strong and significant at the elementary level (see Table 80). Near schools are more likely to have staff development activities than far schools. At the high school level, near schools are <u>not</u> statistically more likely to have staff development activities.

A23. School Improvement Plan--Does the school have an improvement plan with a focus?

Table 81. School Improvement Plan: Elementary

Yes/No	Near	Far	Total	Total Percent
No	71	95	166	84.3
Yes	23	8	31	15.7
TOTAL	94	103	197	100

Table 82. School Improvement Plan: High School

Yes/No	Near	Far	Total	Total Percent
No	11	2	13	65.0
Yes	4	3	7	35.0
TOTAL	15	5	20	100

As shown in Tables 81 and 82, most schools do not meet the criteria for this indicator. That is, they do not have a school plan and a stated focus or mission. Only approximately 16 percent of elementary schools have both, and approximately 35 percent of the high schools have both.

Table 83. Statistics Related to Composite Remoteness for A23

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	10.338	1	.001	Yes
High School	Fisher's Exact Test			.290	No

Near elementary schools are more likely to have a school plan and a focus (see Table 83). Of the 31 that have both, 23 are near schools; only 8 are remote. At the high school level there is no significant remoteness trend.

A24. Parent/Teacher Association--Is there an active PTA?

Table 84. Parent/Teacher Association: Elementary

Yes/No	Near	Far	Total	Total Percent
No	28	32	60	30.5
Yes	66	71	137	69.5
TOTAL	94	103	197	100

Table 85. Parent/Teacher Association: High School

Yes/No	Near	Far	Total	Total Percent
No	10	1	11	55.0
Yes	5	4	9	45.0
TOTAL	15	5	20	100

As shown in Tables 84 and 85, elementary schools are more likely to meet the criteria for this indicator: to have a PTA with more than 50 percent parental participation. Approximately 70 percent of PTAs meet the criteria. For high schools, only 45 percent meet the criteria.

Table 86. Statistics Related to Composite Remoteness for A24

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	.030	1	.845	No
High School	Fisher's Exact Test			.010	Yes

For this indicator there is no relationship to remoteness for elementary schools, but there is for high schools (see Table 86). Both far and near elementary schools have approximately the same degree of parental involvement. The more remote schools are the more active. Four out of five remote high schools have active PTAs.

A25. Other Schools--Are there other schools serving students and families in the school community?

Table 87. Other Schools: Elementary--Are there receiver schools (grades 9-12)?

Yes/No	Near	Far	Total	Total Percent
No	59	49	108	53.5
Yes	36	58	94	46.5
TOTAL	95	107	202	100

Table 88. Other Schools: High School--Are there feeder schools (grades K-8)?

Yes/No	Near	Far	Total	Total Percent
No	5	0	5	25.0
Yes	10	5	15	75.0
TOTAL	15	5	20	100

As reported in Tables 87 and 88, more than half the elementary schools in the study report that there are no receiver schools, or schools where their students can proceed after elementary. For high schools, only 5, or 25 percent, report no feeder schools.

Table 89. Statistics Related to Composite Remoteness for A25

School Level	Test Used	Value	df	Probability <	Significant?
Elementary School	Chi Square	5.301	1	.020	Yes
High School	Fisher's Exact Test			.266	No

The effect of remoteness is significant for elementary schools, but in an unusual direction (see Table 89). The near elementary schools are more likely not to have a receiver school, and the more remote elementary schools are more likely to have at least one. At the high school level, all five of the remote schools report that they do have a feeder school in the community. Because 10 of the 15 near schools also have one feeder school, the effect is not significant.

V. Discussion: The Relationship Between Remoteness and Access to Learning Opportunities (ALO)

Tables 89a and 89b summarize the results on each of the 25 ALO indicators presented in the findings section for elementary and high school. The most obvious generalization is that remoteness is much more related to ALO at the elementary level than at the high school level. Of the 25 ALO indicators at the elementary school level, 19 show some level of statistical significance in their relationship to the composite remoteness variable. At the high school level, only one of the 25 indicators shows any relationship to this variable. It must be emphasized, however, that the limited number of schools in the high school sample (20) prevented the use of any statistics beyond Fisher's Exact Test. Further, 15 of the 20 high schools were considered not remote according to composite remoteness variable. Therefore, the findings at the high school level can only be considered tentative at this time.

To complicate generalizations at the elementary level, several of the indicators that were thought to be significantly related to remoteness appear to give the schools an advantage. In terms of possible advantage, or at least not disadvantage when compared to less remote schools, more remote elementary schools were likely to have:

- Lower student/certified teacher ratios.
- Higher percentages of teachers with AA or AS degrees.
- More local teachers.
- More of both inexperienced and very experienced teachers.

Because there was no significant relationship with remoteness for some indicators, these can be taken as areas in which remote schools are not disproportionately disadvantaged. For example, no statistical relationship was found between remoteness and:

- Student/teacher ratios.
- Core courses offered each year.
- Books/students ratios for language arts, science, and social science books.
- Having an active PTA.

Table 89a. Summary of Statistical Significance: Elementary School

Types of Indicators	ALO Indicators	Significance of Relationship to Composite Remoteness Score
Faculty and Staff	A1. Student/Teacher Ratio	
	A2. Student/Certified Teacher Ratio	*
	A3. Teachers Education Level: BA or higher	
	A4. Teachers Education Level: AA or AS or higher	**
	A5. Local Teachers	**
	A6. Teaching Experience	
Curriculum	A7. Core Courses	
	A8. Books/Students Ratio: Language Arts	
	A9. Books/Students Ratio: Mathematics	*
	A10. Books/Students Ratio: Science	
	A11. Books/Students Ratio: Social Science	
	A12. Supplementary Materials	
Instructional Equipment	A13. Computers	
	A14. Televisions	**
Student Services	A15. Student Services	
	A16. Special Education	
	A17. Counseling	**
Policy Implementation	A18. Student Assessment	**
	A19. Modified Attendance Policy	**
	A20. Language Policy	**
	A21. Central Office Visits to Schools	*
	A22. Staff Development	
	A23. School Improvement Plan	**
Community Support	A24. Parent/Teacher Association	
	A25. Other Schools	*

Key: * = p < .05
** = p < .01
*** = p < .001

Table 89b. Summary of Statistical Significance: High School

Types of Indicators	ALO Indicators	Significance of Relationship to Composite Remoteness Score
Faculty and Staff	A1. Student/Teacher Ratio	
	A2. Student/Certified Teacher Ratio	
	A3. Teachers Education Level: BA or higher	
	A4. Teachers Education Level: AA or AS or higher	
	A5. Local Teachers	
	A6. Teaching Experience	
Curriculum	A7. Core Courses	
	A8. Books/Students Ratio: Language Arts	
	A9. Books/Students Ratio: Mathematics	
	A10. Books/Students Ratio: Science	
	A11. Books/Students Ratio: Social Science	
	A12. Supplementary Materials	
Instructional Equipment	A13. Computers	
	A14. Televisions	
Student Services	A15. Student Services	
	A16. Special Education	
	A17. Counseling	
Policy Implementation	A18. Student Assessment	
	A19. Modified Attendance Policy	
	A20. Language Policy	
	A21. Central Office Visits to Schools	
	A22. Staff Development	
	A23. School Improvement Plan	
Community Support	A24. Parent/Teacher Association	**
	A25. Other Schools (Feeder)	

Key: * = $p < .05$
** = $p < .01$
*** = $p < .001$

There were, however, more ALO indicators for which remoteness appears to relate to disadvantage. More remote elementary schools were likely to:

- Have lower percentages of teachers with a BA degree.
- Have fewer supplementary materials.
- Have fewer computers.
- Have fewer televisions.
- Have fewer types of students services.
- Have lower books/students ratios for math books.
- Not offer special education services.
- Not offer counseling.
- Not implement the statewide testing policy.
- Not have a modified statewide attendance policy.
- Not implement the language policy.
- Not receive DOE visits for classroom purposes.
- Not have staff development activities.
- Not have a school plan with a focus.

The relationship of remoteness to ALO is strongest for variables of physical equipment, such as computers and televisions, and student services, such as special education. This relationship, however, is not as meaningful as the fact that so few schools have any of these material things anyway, near or far. More remote schools are also less likely to implement testing and language of instruction policies or have an attendance policy modified to meet the needs of the school community.

Despite the caveats about interpreting the data for high schools in this study, some tentative conclusions can be drawn from the frequency distributions presented in the Findings section. High schools seem to be somewhat better off than elementary schools in several areas. High schools have a higher level of teachers with BA degrees. High schools also have more physical equipment such as computers and televisions. High schools offer more counseling. High schools are more likely to have a school plan with a focus. Although high schools are less likely than elementary to have an active PTA, this is the one variable that is significantly related to remoteness at the high school level. The more remote schools are most likely to have an active PTA.

Table 90 summarizes these same results in terms of the types of indicators.

Table 90. Summary of Findings by Type of Indicator

Type of ALO Indicator	Findings
Faculty and Staff	Some indicators favor remote schools (lower student/certified teacher ratios); some are difficult to explain (more very inexperienced as well as more very experienced teachers in remote schools); some are unfavorable (fewer BA level teachers).
Curriculum	Generally, no disadvantage was found for remote schools. Core courses offered, and three books/student ratios show no relationship to remoteness.
Instructional Equipment	This indicator was strongly related to remoteness. Remote elementary schools have less equipment.
Student Services	This was also strongly related to remoteness. Remote schools have fewer services.
Policy Implementation	This was somewhat related to remoteness. Remote schools were less likely to implement testing and language policies or to have a modified attendance policy.
Community Support	There was not a strong relationship to remoteness for this indicator. The differences suggest more community support (more active PTA) at remote high schools.

VI. Recommendations

1. Recognize and build upon the fact that remote schools may have certain advantages over less remote schools.

Remote elementary schools tend to have lower student/teacher ratios, especially student/certified teacher ratios. This can be a real advantage in terms of more contact with the teacher and more individualized instruction. School systems should look for ways to optimize this situation. One way to approach this is through staff development activities designed specially for teachers who can work with very small groups of students or who can individualize instruction. Assessment activities for teachers of small mixed age group students could also help. Because the more remote schools also have more local teachers, build upon their strength of local knowledge and culture.

2. Put more resources into physical equipment and books for more remote schools.

While the more remote elementary schools are disproportionately without equipment, almost all the schools need help in this area. Not all schools have the required connections or electricity to power computers and televisions; however, inequities in the distribution of these and other pieces of equipment should be corrected. While remoteness does not mean fewer books, again, there is a general lack of books, near or far.

3. Put more resources into student services, especially special education for remote schools.

A dilemma is how to provide a special education program in a school where there may be only one student eligible for special services, or to provide personal counseling when the need for such counseling is infrequent. Strategic thinking is needed to bring about equal access in these areas. Teachers can be trained, but no one teacher can be expected to be an expert in all educational areas. Mobile specialists have a role to play, but cannot be expected to always be where they are needed at the time they are needed. Some combination of these, with increased use of media and technology, may at least bring some change towards a more equitable situation.

4. Provide special training for the staff of more remote schools in implementing policies.

It may be that some statewide policies cannot be implemented everywhere. However, it is the more remote schools that are not following these policies in areas such as testing and language of instruction. Special training sessions can be effective in moving toward a more uniform application of policies. Policymakers should, however, remain somewhat flexible and be willing to reconstruct policies that are counterproductive in more remote areas.

5. Increase emphasis on staff development.

Given the particular constellation of faculty characteristics at remote schools--fewer with BA degrees, more AA and AS level teachers, more local teachers, and fewer staff development opportunities--an increased emphasis on targeted staff development for remote teachers could be expected to raise the overall quality of instruction.

6. Conduct more in-depth research into the nature of the educational experience in remote and isolated schools.

While the present study provides a baseline of information about the characteristics that define these schools, it does not go into depth concerning what actually happens in the classrooms. A more observational, case-study approach is suggested for this type of research. In keeping with the first recommendation, it might be possible to select "successful" remote schools and conduct an effective remote schools study. This could be directed by the R&D Cadre, building upon their knowledge of local schools in their home entity. The more such investigation can be community based and culturally sensitive, the more likely it is to have useful outcomes.

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Appendix

1. Relationship Between Remoteness and Access to Learning Opportunities (ALO) Statistics
2. All Instruments

Relationship Between Remoteness and Access to Learning Opportunities (ALO) - Statistics

ELEMENTARY SCHOOL

Types of Indicators	ALO Indicators	Significance of Relationship to Remoteness Composite
Faculty and Staff	A1. Student/Teacher Ratio	F=1.59 df=7 p<.1408
	A2. Student/Certified Teacher Ratio	F=4.25 df=6 p<.0005
	A3. Teachers Education Level: BA or higher	F=5.28 df=7 p<.0001
	A4. Teachers Education Level: AA or AS or higher	F=2.54 df=6 p<.0221
	A5. Local Teachers	F=3.16 df=7 p<.0035
	A6. Teaching Experience	F=4.98 df=6 p<.0001
Curriculum	A7. Core Courses	$\chi 2$=.161 df=1 p<.668
	A8. Books/Students Ratio: Language Arts	$\chi 2$=.39.742 df=28 p<.070
	A9. Books/Students Ratio: Mathematics	$\chi 2$=45.064 df=28 p<.022
	A10. Books/Students Ratio: Science	$\chi 2$=22.170 df=28 p<.773
	A11. Books/Students Ratio: Social Science	$\chi 2$=29.212 df=28 p<.402
	A12. Supplementary Materials	$\chi 2$=28.053 df=1 p<.0001
Instructional Equipment	A13. Computers	F=4.91 df=7 p<.0001
	A14. Televisions	F=2.82 df=7 p<.0080

(Table continued)

Relationship Between Remoteness and Access to Learning Opportunities (ALO) - Statistics

ELEMENTARY SCHOOL (Appendix cont.)

Types of Indicators	ALO Indicators	Significance of Relationship to Remoteness Composite
Student Services	A15. Student Services	F=8.70 df=7 p<.0001
	A16. Special Education	$\chi 2$=45.399 df=1 p<.0001
	A17. Counseling (academic)	$\chi 2$=14.074 df=1 p<.0001
Policy Implementation	A18. Student Assessment	$\chi 2$=9.920 df=1 p<.002
	A19. Modified Attendance Policy	$\chi 2$=7.033 df=1 p<.008
	A20. Language Policy	$\chi 2$=7.732 df=1 p<.005
	A21. Central Office Visits to Schools	$\chi 2$=5.997 df=1 p<.014
	A22. Staff Development	F=11.192 df=1 p<.001
	A23. School Improvement Plan	$\chi 2$=10.338 df=1 p<.001
Community Support	A24. Parent/Teacher Association	$\chi 2$=.030 df=1 p<.845
	A25. Other Schools	$\chi 2$=5.301 df=1 p<.020

Relationship Between Remoteness and Access to Learning Opportunities (ALO) - Statistics

HIGH SCHOOL

All significance tests are based on Fisher's Exact Tests

Types of Indicators	ALO Indicators	Significance of Relationship to Remoteness Composite
Faculty and Staff	A1. Student/Teacher Ratio	p<1.000
	A2. Student/Certified Teacher Ratio	p<1.000
	A3. Teachers Education Level: BA or higher	p<1.000
	A4. Teachers Education Level: AA or AS or higher	p<.617
	A5. Local Teachers	p<1.000
	A6. Teaching Experience	p<.131
Curriculum	A7. Core Courses	p<.617
	A8. Books/Students Ratio: Language Arts	p<1.000
	A9. Books/Students Ratio: Mathematics	p<1.000
	A10. Books/Students Ratio: Science	p<1.000
	A11. Books/Students Ratio: Social Science	p<1.000
	A12. Supplementary Materials	p<1.000
Instructional Equipment	A13. Computers	p<.542
	A14. Televisions	p<.478
Student Services	A15. Student Services	p<.558
	A16. Special Education	p<1.000
	A17. Counseling	p<.617
Policy Implementation	A18. Student Assessment	p<1.000
	A19. Modified Attendance Policy	p<.533
	A20. Language Policy	p<1.000

(Table continued)

Relationship Between Remoteness and Access to Learning Opportunities (ALO) - Statistics

HIGH SCHOOL (Appendix cont.)

All significance tests are based on Fisher's Exact Tests

Types of Indicators	ALO Indicators	Significance of Relationship to Remoteness Composite
	A21. Central Office Visits to Schools	p<1.000
	A22. Staff Development	p<.613
	A23. School Improvement Plan	p<.290
Community Support	A24. Parent/Teacher Association	p<.010
	A25. Other Schools (Feeder)	p<.266

PREL Equity Study

School Remoteness Survey

June 1994

For the purpose of this study, equity refers to equitable access to learning opportunities in schools.

1. Name of School _____

2. Entity _____

3. Location of School _____
   Village/Island Atoll/Municipality/District

4. Data Collector _____ Informat _____

5. Date _____

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: _____
Reason
NIA = No information is available
QNA = The question is not applicable to this school or entity

DISTANCE

6. How far is the school in miles from the various locations? (Straight line distance)

Point of reference	Name of Town/City where the point of reference is	Distance to school	Reason unanswered
DOE Central Office			
Municipality Center			
Entity Center			

7 (a). Check only one. This school and the DOE central office are on:

- ☐ the same island
- ☐ different islands and the journey covers open ocean
- ☐ different islands and the journey covers ocean within reef

7 (b). Check only one. Indicate the type of ground terrain:

- ☐ rough mountainous terrain with paths but no roads for vehicles
- ☐ rough terrain with roads for off-road vehicles
- ☐ rough terrain with paved roads
- ☐ paved roads easily traveled

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: _____
Reason
NIA = No information is available
QNA = The question is not applicable to this school or entity

8. Please check **all means of transportation available to the general population** between the school and the locations listed. (Check all that apply)

Transportation Means	DOE Central Office	Municipality Center	Entity Center	Reason Unanswered
Air:				
Commercial airlines privately-owned				
Commercial airlines government-owned				
Charter airplane privately-owned				
Charter airplane government-owned				
Ocean:				
Ferry or shuttle boat privately-owned				
Ferry or shuttle boat government-owned				
Field trip ship privately-owned				
Field trip ship government-owned				
Motor boat privately-owned				
Motor boat government-owned				
Ground:				
Bus or shuttle privately-owned				
Bus or shuttle government-owned				
Taxi privately-owned				
School bus privately-owned				
School bus government-owned				
Vehicle privately-owned				
Vehicle government-owned				
Foot				
Other (specify)				

9. Please write **how often each service is available to the general population** for the following means of transportation between the school and the locations listed. Answer all that are available.

Transportation Means Available	Counting Method	To DOE Central Office	To Municipality Center	To Entity Center	Reason unanswered
Air:					
Commercial airlines	per month				
	per week				
	per day				
Charter airplanes	per month				
	per week				
	per day				
Ocean:					
Ferry / shuttle boat	per month				
	per week				
	per day				
Field trip ship	per year				
	per month				
	per week				
Motor boats	per month				
	per week				
	per day				
Other(Specify)					
Ground:					
Public bus or shuttle	per week				
	per day				
School bus	per month				
	per week				
	per day				
Other (specify)					

10. Write in **the cost and time it takes for a one -way trip** for the means of transportation between the school and locations listed. (Note: Please mention time with its units, e.g., 20 minutes)

Transportation Means	DOE Central Office		Municipality Center		Entity Center		Reason unanswered
Air:	**Cost**	**Time**	**Cost**	**Time**	**Cost**	**Time**	
Commercial airlines privately-owned							
Commercial airlines government-owned							
Charter airplane privately-owned							
Charter airplane government-owned							
Ocean:							
Ferry or shuttle boat privately-owned							
Ferry or shuttle boat government-owned							
Field trip ship privately-owned							
Field trip ship government-owned							
Motor boat privately-owned							
Motor boat government-owned							
Ground:							
Bus or shuttle privately-owned							
Bus or shuttle government-owned							
Taxi privately-owned							
School bus privately-owned							
School bus government-owned							
Vehicle (car or truck) privately-owned							
Vehicle (car or truck) government-owned							
Foot							
Other (specify)							

11. Rate each means of transportation available as to the **most commonly used means of transportation** from the school to the DOE central office used **by school administrators?** Please use the scale below.

1 = Never used
2 = Used for few of the trips made
3 = Used for about half of the trips made
4 = Used for many of the trips made
5 = Used almost always

Transportation Means	Not available	Never				Always
Air:						
Commercial airline		1	2	3	4	5
Small airplane		1	2	3	4	5
Ocean:						
Ferry or shuttle boat		1	2	3	4	5
Field trip ship		1	2	3	4	5
Motor boat		1	2	3	4	5
Ground:						
Public bus or shuttle		1	2	3	4	5
Taxi		1	2	3	4	5
School bus		1	2	3	4	5
Vehicles (car or truck)		1	2	3	4	5
Foot		1	2	3	4	5
Other (specify)		1	2	3	4	5

12. Please check **all the means of communication available** between the school and the locations listed. (Check all that apply)

Communication Means	DOE Central Office	Municipality Center	Entity Center	Reason unanswered
Telephone				
Cellular telephone				
Pager				
Walkie talkie				
FAX				
Computer-related communication				
PEACESAT				
Single Side Band Radio (SSB)				
CB radio				
Government postal service				
Private company postal company				
DOE packet/courier				
Face to face meetings at the school				
Face to face meetings at the central office				
Other				

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: _____
Reason
NIA = No information is available
QNA = The question is not applicable to this school or entity

13. Please write in the **frequency of service available for each means of communication** between the school and the locations listed.

Use the following codes:

- Write **D** for service available on a daily basis
- Write in the **number of times services are available** on less than a daily basis, that is, the number of times per week or per month or per year (Indicate whether the number is per week or per month or per year.)
- Write **NA** for services not available

Communication Means	DOE Central Office	Municipality Center	Entity Center	Reason unanswered	Other comments
Telephone					
Cellular telephone					
Pager					
Walkie talkie					
FAX					
Computer-related communication					
PEACESAT					
Single Side Band Radio (SSB)					
CB radio					
Government postal service					
Private company postal service					
DOE packet/courier					
Other					

14. On a scale of one to five, rate (by circling the number) the means of communications available in terms of most common usage between the school and the DOE central office. Please rate all means listed in the table below.

1 = Never used
2 = Used for few of the communications made
3 = Used for about half of the communications made
4 = Used for many of the communications made
5 = Used almost always

Communication Means	Not Available	Rating				
Telephone		1	2	3	4	5
Cellular telephone		1	2	3	4	5
Pager		1	2	3	4	5
Walkie talkie		1	2	3	4	5
FAX		1	2	3	4	5
Computer-related communication		1	2	3	4	5
PEACESAT		1	2	3	4	5
Single side band radio(SSB)		1	2	3	4	5
CB radio		1	2	3	4	5
Government postal service		1	2	3	4	5
Private company postal service		1	2	3	4	5
DOE packet/courier		1	2	3	4	5
Face to face meetings at the school		1	2	3	4	5
Face to face meetings at the central office		1	2	3	4	5
Other(specify)		1	2	3	4	5

15. Please check all **broadcast and print media systems available from the locations specified below to communicate with the community where the school is located.**

Media	DOE Central Office	Municipality Center	Entity Center
Commercial television			
AM or FM radio			
Newspaper			
Others(Specify)			

16. Are video cassette rentals available to the community of the school? Check one: ☐ yes ☐ no

17. Are there book stores in this community? Check one: ☐ yes ☐ no

18. Is there a public library in this community? Check one: ☐ yes ☐ no

19. Check the means to relay information available to this community:

Means of Relaying Information	Available
Public address system	
VCR sharing	
Messenger	
Other (specify)	

Write in the **cost of an average communication interchange between the school and the central office.** Include the duration of that interchange. For example, a 10 minute call from Honolulu to Kauai High School costs $3.00.

Communication Means	Type of communi-cation	Unit of cost in duration of time or weight of written communication	Cost to DOE Central Office	Cost to Municipality Center	Cost to Entity center	Reason unanswered
Telephone	local call long distance call					
Cellular telephone	local call long distance call					
Pager	local call long distance call					
Walkie talkie						
FAX	local FAX long distance FAX					
Computer-related communication						
PEACESAT						
Single side band radio (SSB)						
CB radio						
Government postal service	standard letter					
Private company postal service	standard letter					
Private company postal service						
DOE packet/courier	standard letter					

PREL Equity Study

School Opportunity to Learn Profile

June 1994

For the purposes of this study, equity refers to equitable access to learning opportunities in schools.

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: List reason _____
NIA = No information available
QNA = The question is not applicable to this school or entity

1. School Name _____

2. Level of school (Check one)
   ☐ Elem. Sch. ☐ Middle Sch. ☐ High Sch.

3. Type of school (Check one)

   ☐ Day School ☐ Boarding School ☐ Both day and boarding school

4. Grade levels served _____

5. Location _____
   Entity Municipality Village

6. Name of School Principal _____

7. Date _____

8. Name of Data Collector _____

PHYSICAL CHARACTERISTICS

9. Has a School Facilities Checklist been completed for this school in 1991-92? ☐ yes ☐ no
   If no, please complete the School Facilities and Condition checklists with the assistance of your R & D Cadre member .

10(a). Is this school on public land? Check one. ☐ yes ☐ no

If no, what are the conditions of the lease? Provide information requested:

10(b). Lease is renewable every _____ years.

10(c). Amount of lease payment each year is _____.

10(d). Lease is renewable upon expiration. ☐ yes ☐ no

10(e). When will the lease expire? Date _____

11. List other schools serving students and families in this school community: (Include private schools)

School name	Grade Levels Served	Location	Check one: Public School	Check one: Private School

ENROLLMENT

12. Complete the following table:

Grade	Number of students	Number of males	Number of females	Age range of students

13. What is the ethnicity of the student population?
Provide the number of students for each ethnic group or if data is not available, estimate percentages. Refer to list of ethnic groups below to complete this profile.

Carolinian
Caucasian
Chamorru
Chinese
Chuukese
Filipino
Fijian
Gilbertese
Hawaiian
Japanese
Kapingi
Korean
Kosraean
Marshallese
Mortlokese
Nukuoroan
Palauan
Pohnpeian
Rematthau
Samoan
Yapese
Mixed ethnicity: _____

Ethnic group	Number of students or estimate of percentage

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: List reason
NIA = No information available
QNA = The question is not applicable to this school or entity

14. Complete the table below to indicate students' performance at each grade level during the '93-'94 school year.

Grade	Number of students	Number passed	Number retained	Number awarded academic honors

15 . If this school is an elementary or middle school answer, the following questions:

15(a). How many students who complete the highest level of this school will attend high school? Number _____

15(b). Based on the previous 1-2 years, estimate the percentage of students from this school who will attend high school in this entity. _____ %

15(c). Based on the previous 1-2 years, estimate the percentage of students from this school who will attend high school outside of this entity. _____ %

15. If this school is a high school, answer the following questions:

15(d). How many students who complete the highest level of this school will attend post-secondary school? Number _____

15(e). Based on the previous 1-2 years, estimate the percentage of students from this school who will attend post-secondary school in this entity. _____ %

15(f). Based on the previous 1-2 years, estimate the percentage of students from this school who will attend post-secondary school outside this entity. _____ %

16. What was the total school enrollment as of September 30, 1993? _____

17. What was the total school enrollment as of May 1, 1994? _____

18. If there is a difference in enrollment (between items #16 - #17), what are the major reasons for that difference?

- ☐ Students transferred to other schools
- ☐ Students were expelled
- ☐ Students stopped attending school
- ☐ Don't know the answer
- ☐ Refuse to answer
- ☐ No Information available
- ☐ Question is not applicable to this school

19. How many days was school in session during the '93-'94 school year? _____days

20. Write the number of students or estimate the percentage of students with perfect attendance during the 1993-94 school year. Number____ or _____ %

21. Write the average daily student attendance (ADSA) for the 1993-94 school year. Use the formula below to compute. ADSA:

ADSA = Total days of all students' attendance in a semester or year divided by number of days school was open in that semester or year

$$\text{ADSA} = \frac{\text{Total days of student attendance}}{\text{Number days school in session}} = _____$$

22. Write the number of students or estimate the percentage of students dropped from school due to absences? Number _____ or _____ %

23. What are the school policies regarding suspension and expulsion of students due to absences? Please attach documentation.

24. Estimate the percentage of students who re-enroll after being expelled or suspended due to absences. _____ %

FACULTY AND STAFF

25. Complete the following table to indicate faculty and staff positions at the school:

Number of school administrators		Number of teachers		Number of aides		Number of other staff	
Male	Female	Male	Female	Male	Female	Male	Female

26 What is the total number of employees at the school? _____

27. List the number or estimate the percentage of teachers with perfect attendance during the '93-'94 school year? Number _____ or _____ %

28. List the average daily attendance of school employees (ADSEA) during the 1993-94 school year. Use the formula below.

ADSEA= Total days of all school employees' attendance in a semester or year divided by number of days school was open in that semester or year

$$\text{ADSEA} = \frac{\text{Total days of school employees' attendance}}{\text{Number days school in session}} = _____$$

29. Indicate the number of teachers who achieved the following levels of credentials:

Associate degree	Bachelor degree	Masters degree	Doctorate

30. How many teachers hold teaching certificates? _____

31. How many teachers are teaching in their area(s) of study? (E.g. Math major teaching math)

32. How many teachers and staff are currently enrolled in a degree program?
Number of teachers_____ Number of staff_____

33. Complete the following table by writing the number of teachers next to the number of years of teaching experience they have in this school :

Teaching experience in the SCHOOL	Number of teachers
1-2 years	
3-5 years	
6-10 years	
11-15 years	
16+ years	

34. Complete the following table by writing the number of teachers next to the number of years of teaching experience they have in this entity:

Teaching experience in the ENTITY	Number of teachers
1-2 years	
3-5 years	
6-10 years	
11-15 years	
16+ years	

35. Complete the following table by writing the number of teachers' total years of teaching experience:

TOTAL YEARS teaching experience	Number of teachers
1-2 years	
3-5 years	
6-10 years	
11-15 years	
16+ years	

CURRICULUM

36. Write the number of courses offered within the subject areas listed at each grade level. If no courses are offered, write zero. List other subject areas and indicate the number of courses offered in the other column. Attach course list if available.

Grade	Math	Science	Language	Social Studies	Vocational Education	Other (list other subjects and the number of courses

37. List the names or titles of courses offered in each subject area:

37(a). Math

37(b). Science

37(c). Language

37(d). Social Studies

37(e). Vocational Education

37(f). Other subject areas

38. Complete the following table on required textbooks for each grade level for elementary schools, or the subject areas of math, science, language, social studies, and vocational education for high schools. (Attach additional sheets if necessary.)

For Grade level(s) _____ or Subject Area/Department_____

Required Textbook	Location of development (Check one: entity)	Location of development (Check one: region)	Location of development (Check one: out of region)	Latest printing date	Condition of textbooks (Check one: good)	Condition of textbooks (Check one: fair)	Condition of textbooks (Check one: poor)	Ratio of books to student

39. How many supplementary resource materials (non-textbook) are included in the school inventory? (Attach additional sheets if necessary.)

For Grade level(s) _____ or Subject Area/Department_____

Supplementary resource material	Location of development			Latest printing date	Condition of textbooks			Ratio of books to student
	Check one:				Check one:			
	entity	region	out of region		good	fair	poor	

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: List reason
NIA = No information available
QNA = The question is not applicable to this school or entity

INSTRUCTIONAL EQUIPMENT

40. Complete the following table to indicate the number of instructional equipment available in the school:

Equipment	Number	Reason unanswered
overhead projector		
opaque projector		
computer		
monitor		
computer printer		
audio tape player		
audio tape recorder		
movie projector		
slide projector		
VCR/monitor		
television		
laser disc player		
karaoke sing along machine		
cam-corder		
compact disk player		
phonograph/stereo		
calculator		

Add other permanent equipment (not listed above) by department. Do not include consumables and supplies.

Science		
Vocational Ed		
Social Studies		
Language		
Math		

41. Check all distance learning services available to the school.

Distance Learning Services	Available? Check one: yes	no	Reason unanswered
computer modems			
television broadcasts			
radio broadcasts			
PEACESAT			
other			

STUDENT SERVICES

42. Complete the following table to indicate the supplemental programs available to students at your school. If a program was discontinued during the 1993 school year, but had been available prior to that year, please indicate that it was discontinued and fill in the rest of the table with information about the program before it was discontinued.

Program	Available			Years of implementation at this school	Eligible students		Number of students eligible	Number of students served
	Check one:				Check one:			
	yes	no	discontinued		All	Select group		
Food service								
Transportation service								
Health services								
Special education								
Gifted and talented								
Advanced placement classes								
At-risk programs								
Early childhood programs								
Disability program								
Academic counseling services								
Career counseling								
Post-secondary education counseling								
Life skills counseling (e.g personal adjustments, drugs, suicide)								
Tutoring services								
Student records								
TRIO								
Athletics								
Extra-curricular clubs (e.g. 4H, Scouts Young Astronauts)								
Talent search								
FOCUS								
Evening high school								
GED								
Pre-nine summer program								
Post secondary support								

Program	Available			Years of implementation at this school	Eligible students		Number of students eligible	Number of students served
	Check one:				Check one:			
	yes	no	discontinued		All	Select group		
Cooperative education program								
STOCA								
Teacher academy								
Drug free								
Close-up								
Upward bound								
Cultural Arts clubs								
Other (please specify)								

STUDENT ASSESSMENT

43. Does this school implement a state-wide testing system? Check one: ☐ yes ☐ no
If yes, describe the tests administered at the school (i.e. name of test, frequency of testing and grade levels tested).

Name of test	Frequency of testing	Grade levels tested

QUALITY OF INSTRUCTION

44. Is a teacher performance appraisal or teacher evaluation system implemented at the school?
Check one: ☐ yes ☐ no

44(a). If yes, who conducts the performance appraisals? _____

44(b). How often? _____

45. What percentage of instruction is conducted in the following languages?

Language/medium of Instruction	% of Instruction			
	K - 3	4 to 6	7 to 8	9 to 12
Vernacular(Specify)				
English				
Other (Specify)				

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46. In the previous item, _____ is indicated as the primary language of
write language on the line above

instruction. For what % of teachers in the school is this their first language/mother tongue? _____ %

47. What language is the first language/mother tongue of most teachers in this school? _____

48. What percentage of teachers are local residents who were raised in the local culture? _____ %

POLICY IMPLEMENTATION AT THE SCHOOL LEVEL

49. Is there a mandatory system-wide school attendance policy? Check one: ☐ yes ☐ no

49(a). Does your school have a similar policy modified to meet the needs of your school community? Check one: ☐ yes ☐ no

49(b). If the answer to the previous question is yes, please explain or attach the locally modified policy.

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: List reason
NIA = No information available
QNA = The question is not applicable to this school or entity

50. Does the school implement the entity's system-wide policy on the following areas:

Policy area	Check one: yes	no	Reason unanswered
Teacher/student ratio			
Grading system			
Student testing			
Language or medium of instruction			
Curriculum			
Teacher performance standards			
Student performance standards			
Non-discrimination on the basis of gender, ethnicity, national origin, and religious beliefs			

51. In the following table, check only the services received by the school during the '93-'94 school year:

Services from Central Office/Department or Ministry of Education to Schools	Yes
Prepare scope and sequence of curriculum	
Distribute scope and sequence of curriculum	
Prepare curriculum materials	
Distribute curriculum materials to schools	
Order textbooks for schools	
Order school supplies for schools	
Deliver school supplies to schools	
Evaluate teachers' performance	
Evaluate principal's performance	
Monitor schools to ensure that the scope and sequence is being adhered to	
Monitor classroom instruction during school visits	
Administer high school entrance exam and other tests	
Disseminate relevant information to schools	
Coordinate training activities within the entity	
Coordinate and identify participants for educational activities outside the entity	
Conduct in-service training for teachers in curriculum content	
Conduct curriculum alignment workshops	
Contract other departments or private sector to maintain and renovate schools	
Hire school staff	
Purchase food stuff and kitchen supplies for school	
Deliver food and supplies to schools	
Hire cooks	
Train cooks in management and nutrition	
Monitor kitchen sanitation and cooks' health certification	
Coordinate services from other governmental agencies and departments	
Coordinate and provide transportation services	
Other(specify)	

52. How many visits to the school were made by central office staff during the 1993-94 school year?

_____

53. How many different people in the following role groups visited your school site during the 1993-94 school year? How many visits were made to the school by these people during the 1993-94 school year?

Role group	Number of individuals	Number of visits Check one:			
		1 to 3	4 to 5	7 to 10	11 +
Administrator					
Education Specialist (Resource Teacher or Curriculum Specialist)					
Other					

54(a). What percentage of the visits were concerned with administrative matters and ceremonies? _____ %

54(b). What percentage of the visits were concerned with service to classrooms? _____ %

55. Estimate the total amount of time for all site visits during the 1993-94 school year. _____days

56. How many different people from this school visited the central office during the 1993-94 school year? How many visits were made to the central office by these people during the 1993-94 school year?

Role group	Number of individuals	Number of visits Check one:			
		1 to 3	4 to 6	7 to 10	11 +
School Administrator					
Classroom Teacher					
Other					

57. Estimate the total amount of time for all visits to central office by school staff during the 1993-94 school year. _____days

58. List the staff development activities provided to the school staff during the '93-'94 school year:

Topic	Dates of training	Number of staff attending

LOCAL SCHOOL INITIATIVES

59. Complete the following table on local school initiatives in this school. Explain.

Local School Initiative	Check one: yes	no	If yes, attach documentation
School improvement plan			
Focus area of 93 - 94 school year efforts			
Vision statement			
Mission statement			
Performance review for administrators and principal			

COMMUNITY SUPPORT

60. Does the school have a parent/teacher association? Check one: ☐ yes ☐ no

60(b). If yes, approximately what percentage of the families attends meetings? _____%

61. What kinds of contributions does the school receive from parents? Check all that apply:

Contributions	Given on a regular basis	By special request	Regularly and on special request	Never given
Monetary or in-kind				
Contributions and gifts				
Volunteers in the school				
Guest speakers				
Collaboration with businesses				
Other(specify)				

62. What kinds of contributions does the school receive from persons other than parents? Check all that apply:

Contributions	Given on a regular basis	By special request	Regularly and on special request	Never given
Monetary or in-kind contributions and gifts				
Volunteers in the school				
Guest speakers				
Collaboration with businesses				
Other(specify)				

EQUITY STRATEGIES

63. What provisions are being made for students in this school to ensure equitable access to learning ?

64. To your knowledge, what is available to students in other schools within this entity that is not available to students in your school which might be appropriate for your school to offer?

PREL Equity Study
School System-Wide Administrative
Policies and Procedures Survey

June 1994

For the purpose of this study, equity refers to equitable access to learning opportunities in schools.

Answer all questions as completely as possible. If for some reason you plan to leave an item blank, please indicate your reason by using the following options:

DK = Don't know the answer
O = Other: _____
Reason
NIA = No information is available
QNA = The question is not applicable to this school or entity

1. Entity _____

2. Name of Educational System _____

3. **Name(s) of person(s) interviewed** **Title(s)**

_____ _____

_____ _____

_____ _____

4. Date _____

5. Data Collector _____

6. Location of Central Office _____

7. Grade levels administered by this school system _____

8. List the post- secondary institutions available within the entity.

Name of school	Location	Public or Private	Controlled by DOE Indicate Yes or No

9. Does the department have policies and monitoring of the areas listed below?

Policy Area	Presence of Policies Indicate Yes or No	Indicate Presence of Monitoring System	
		Yes	No
A. Non-discrimination on the basis of gender, ethnicity, national origin, and religious beliefs			
B. Mandatory school attendance			
C. Teacher/student ratio (class size)			
D. System-wide grading system			
E. System-wide student testing system			
F. System-wide student performance standards			
G. Language or medium of instruction			
H. System-wide curriculum			
I. Teacher certification			
J. Teacher performance standards			
K. Equal access to educational programs and services			
L. Equal access to secondary education			
M. Equitable financing of individual schools			

If yes, attach documentation of policy and monitoring system.

A. Non-discrimination

B. Mandatory school attendance

C. Teacher/student ratio (class size)

D. System-wide grading system

E. System-wide student testing system
If yes, list the name(s) of the test(s) and grades tested for each test.

F. System-wide student performance standards

G. Language or medium of instruction

H. System-wide curriculum

I. Teacher certification

J. Teacher performance standards

K. Equal access to educational programs and services

L. Equal access to secondary education

M. Equitable financing of individual schools

10. Is there a department policy governing the following levels of educational finance?? If yes, attach documentation.

Level	Indicate Yes or No
Central budget	
District budget	
School level budget	
Lumpsum budgeting to school	
Other (specify)	

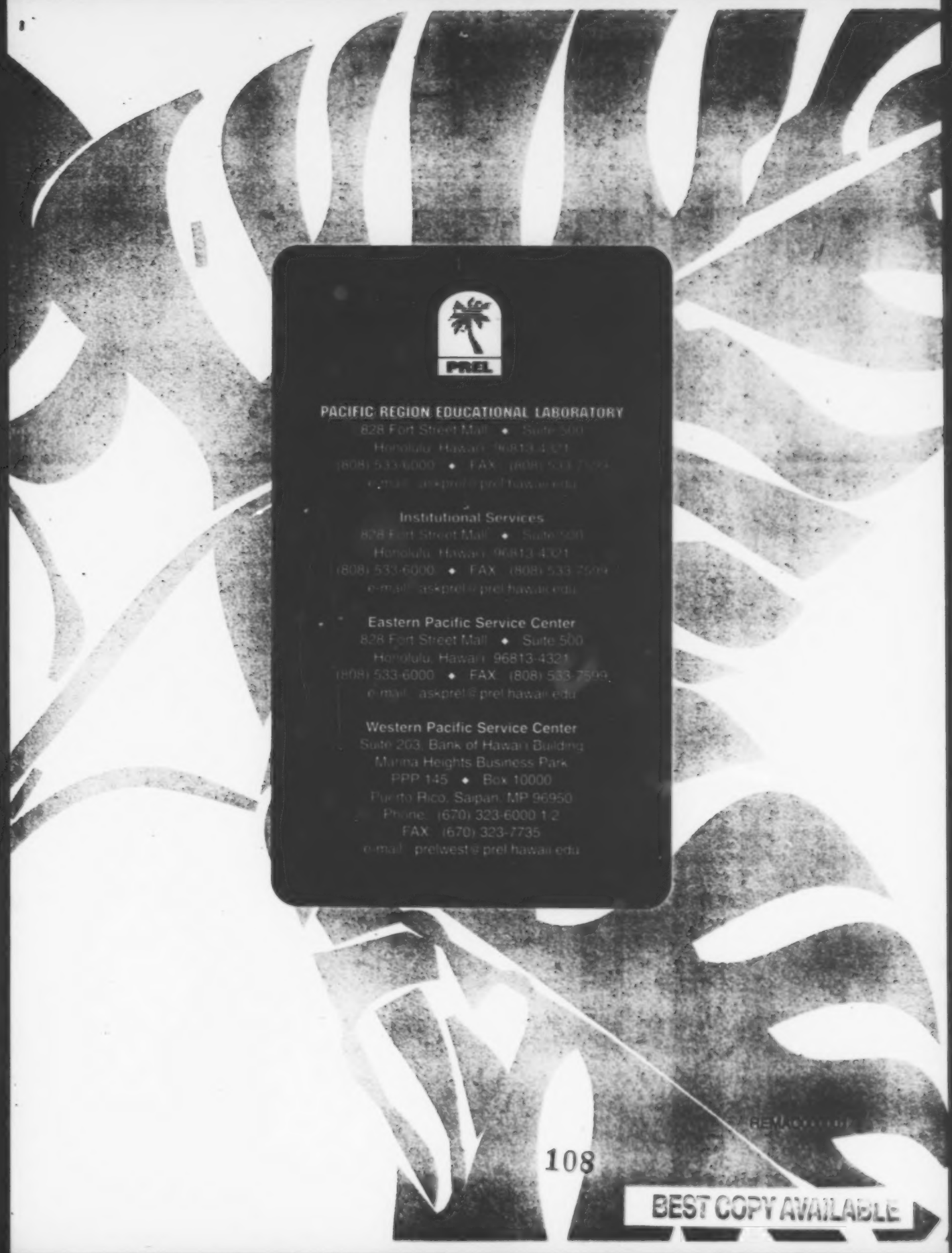
11. Does the central office cover the cost of education-related communication between the central office and the schools? ☐ yes ☐ no

12. Does the central office cover the cost of transportation for central office staff to conduct education-related business at the school? ☐ yes ☐ no

13. Is there a central office budget category to cover the cost of transportation for school staff to conduct business at the central office? ☐ yes ☐ no

14. Indicate yes or no for all of the following services that are available to **all** schools from the central office.

Services from Central Office/Department or Ministry of Education to Schools	Yes	No
Prepare scope and sequence of curriculum		
Distribute scope and sequence		
Prepare curriculum materials		
Distribute curriculum materials to schools		
Order textbooks for schools		
Order school supplies for schools		
Deliver school supplies to schools		
Evaluate teachers' performance		
Evaluate principal's performance		
Monitor schools to ensure that the scope and sequence is being adhered to		
Monitor classroom instruction during school visits		
Administer high school entrance exam and other tests		
Disseminate relevant information to schools		
Coordinate training activities within the entity		
Coordinate and identify participants for educational activities outside the entity		
Conduct in-service training for teachers in curriculum content		
Conduct curriculum alignment workshops		
Contract other departments or private sector to maintain and renovate schools		
Hire school staff		
Purchase food stuffs and kitchen supplies for school		
Deliver food and supplies to schools		
Hire cooks		
Train cooks in management and nutrition		
Monitor kitchen sanitation and cooks' health certification		
Coordinate services from other governmental agencies and departments		
Coordinate and provide transportation services		
Other (specify)		



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